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THE UNIVERSITY OF ALBERTA

A STUDY OF RELATIONSHIPS BETWEEN SCHOOL CLIMATE
CHARACTERISTICS AND STUDENT ATTITUDES
TOWARD THE SCHOOL

by

JOSEPH FREDERICK PYRA

A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "A Study of Relationships Between School Climate Characteristics and Student Attitudes Toward the School" submitted by Joseph Frederick Pyra in partial fulfilment of the requirements for the degree of Master of Education.

ABSTRACT

The aim of this study was to determine the relationship between certain climate characteristics as measured by the subtests of the Organizational Climate Description Questionnaire and student morale, attitudes, attendance, and drop-out rate.

The sample involved grade ten students in forty-seven schools. These were drawn from a larger sample of 185 schools which participated earlier in the year in a CSA clinic on organizational climate. The findings of the study are outlined in the following paragraphs.

None of the subtests correlated significantly with student morale at the .05 level. However, a multiple regression prediction showed that three subtests acting simultaneously yielded a significant multiple R; these tests were Intimacy, Production Emphasis and negatively weighted Disengagement. A check was made to determine whether other school or principal characteristics, namely, type of school, size of school, experience of principal as principal, principal tenure in a school, age of principal, and amount of graduate training in educational administration, had any bearing on school morale. Chi square calculations showed that the type of school might be related to student morale; none of the other characteristics mentioned were significantly related.

Pearson product-moment correlations indicated that Production Emphasis and Thrust were correlated significantly with student rated school effectiveness, Production Emphasis with student rated teacher effectiveness and Production Emphasis again with student rated teacher likeability. Multiple regression predictions calculated on each of the

three criterion variables indicated that the two best and only significant predictors of student rated school effectiveness were Production Emphasis and negatively weighted Disengagement. The two best and only significant predictors of student rated teacher effectiveness were Production Emphasis and negatively weighted Disengagement. And finally, the best and only significant predictor of teacher likeability was again Production Emphasis.

Three subtests correlated significantly with student rated principal effectiveness; these were Thrust, Aloofness and Esprit. Multiple regression prediction of the criterion indicated that Thrust and negatively weighted Aloofness were the two best and only significant predictors.

No significant Pearson r 's or multiple R 's were found for the relationship between subtests and student attendance and student drop-out.

Finally, it was established that the subtests could be ranked in order of effectiveness in predicting student attitudes. The ranking from most effective to least effective was: Production Emphasis, Intimacy, Disengagement, Hindrance, Esprit, Thrust, Aloofness and Consideration.

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CHAPTER I

INTRODUCTION

Prior to centralization, the majority of our schools were of the one-roomed "little red school house" type. Barring the annual or bi-annual visit of the inspector or the occasional visit of school trustees, the teacher in this microcosm was fairly well responsible for the total educational process. It could be stated with a reasonable degree of certainty that the factors governing the learning situation in this type of school were largely the result of teacher-pupil interaction. However, population growth in urban centers, increased demands for education, and centralization in rural areas resulted in situations where several hundred students now attend one school. Contemporary educational philosophy and the demands of the situation required that more than one teacher be appointed to provide these children with the necessary education. At the same time, for purposes of co-ordination of staff activities and the execution of administrative functions, a head teacher or principal, was appointed. This introduced a third factor into the learning situation, thus resulting in a host of new relationships--principal-teacher, teacher-teacher, principal-student, principal-teacher-student, and so on. For its major point of focus, this research report deals with only one of these loci of interaction--that of principal-teacher-student.

I. THE PROBLEM

Studies have shown that different teachers have different effects on student achievement, morale, discipline, mental health, attitudes, and other student variables.¹ It has also been shown that in industry different supervisors have different effects on their employees. A question which can be raised concerns whether it can thus be concluded that principals differentially affect teachers who carry this differential effect into the classroom and thus produce differences in student morale, achievement and attitudes. In other words, does the principal-teacher relationship in a school set up a complementary climate in the classroom in teacher-pupil interaction which will produce differences in student morale, achievement and attitudes? This study was designed in an attempt to provide a partial solution to the question. Specifically, it investigated the relationship between school climate characteristics and

- (1) student morale,
- (2) student rated school effectiveness,
- (3) student rated teacher effectiveness,
- (4) student rated principal effectiveness,
- (5) student rated teacher likeability,
- (6) student attendance rate,
- (7) student drop-out rate,

¹For examples see: (1) Harold H. Anderson and others, Studies of Classroom Personality, I, II, III. Applied Psychology Monographs of the American Psychological Association (Stanford: Stanford University Press, 1945, 1946); (2) N. A. Flanders, "Teacher-Pupil Contacts and Mental Hygiene," Journal of Social Issues, XV, No. 1, pp. 30-39.

(8) student attitudes towards:

- (a) the teachers,
- (b) the school,
- (c) the school program,
- (d) the appropriateness of school work,

(9) student attitudes related to:

- (a) future expectations,
- (b) social acceptance.

It seemed probable that not all climate characteristics would exert the same weight in influencing the different variables listed above. That is, in one case a certain type of principal behavior might influence the staff and yet have no direct bearing on the student whereas, another type of behavior could have an effect not only on staff but also on student behavior. Consequently, a second purpose of this study was to determine whether certain climate characteristics exerted more influence than others in determining student morale, attitudes, attendance rate, drop-out rate, and so on.

II. SIGNIFICANCE OF THE PROBLEM

An examination of literature dealing with principal-teacher-student relationships illustrated that interest in research in this area lay essentially in investigating bilateral relationships, that is, either principal-teacher or teacher-student relationships. In analyzing principal-teacher relationships, it was implicitly understood, if not explicitly stated, that students benefitted from a good climate and suffered in a

less desirable climate. Similarly, investigators researching teacher-pupil relationships were conspicuously silent about the role of the principal in the situation. It was felt by the present investigator that an examination of the trilateral relationship--principal-teacher-student--might help to change conjecture and surmise into factual knowledge. There is an evident need for research designed to investigate the role of a principal in determining the climate of a school and how students react to different climate characteristics.

Further significance of the problem lies in the possibility that if different school climates as affected by principal-teacher relationships do not produce different student morale and attitudes, then the importance of "good" or "bad" school climate is not as great as if it did affect student results and attitudes differentially since the main objective in schools is to produce change in a desirable direction in students. A similar thought is expressed by Neal who, when talking about the principal and program development, says:

A precise definition of instructional program will not be attempted. Instead I shall indicate the components which, in my view, make up the program of a school. The essential component is the learning experiences which a pupil has in his progress towards educational goals. This is the result of the interaction of the learner with what I shall call, for the moment, the instructional devices provided by the school. All other parts of the program are subsidiary to this component in that they should be designed to produce the best learning experience.²

²W. D. Neal, "The Principal and Program Development," The Principal and Program Development: The 1964 Alberta Principals Leadership Course, F. Enns, Editor (The Policy Committee, Leadership Course for School Principals, Edmonton, Alberta, 1964), p. 1.

Thus, the fact is brought out that the student is crucial. If the student were not affected by school climate, then the desirability of a good climate would be restricted to the salutary effect it would have on principal-teacher and teacher-teacher relationships. It would then be concerned more with the humane aspect of person to person relationships amongst the teaching staff than in achieving the goals of the school more directly.

III. DEFINITIONS OF TERMS USED

Substantive Definitions

1. Organizational Climate is defined as "patterns of social interaction that characterize an organization. The main units of interaction in this concept of climates are individuals, the groups as a group, and the leader."³ Further Halpin and Croft visualize the climate of the school as the personality of the school when they state:

The Organizational Climate can be construed as the organizational "personality" of the school; figuratively, "personality" is to the individual what "climate" is to the organization.⁴

Operational Definitions

1. School Organizational Climate is defined as the climate of a school as described and measured by the Organizational Climate Description

³Alexander M. Feldvebel, "Organizational Climate, Social Class, and Educational Output," Administrator's Notebook, XII (April, 1964), p. 1.

⁴Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (The University of Chicago: Midwest Administration Center, 1963), p. 6.

Questionnaire.

2. The Organizational Climate Description Questionnaire (OCDQ) is the instrument developed by Halpin and Croft to describe and measure school organizational climate. Further reference made to the instrument will be abbreviated to OCDQ.

3. School Climate Characteristics are defined in terms of the eight subtests of the OCDQ. Four subtests refer to teacher behavior and four to principal behavior.

Teacher's Behavior

- (a) Disengagement refers to teacher behavior which is related to the degree of personal involvement in and enthusiasm for their work. It is a measure of the extent to which teachers are really behaving as a group in relation to the job at hand or the extent to which there is griping and bickering amongst them.
- (b) Hindrance refers to the extent to which teachers feel that they are burdened by routine duties, reports, committee requirements, and other administrative demands of the principal.
- (c) Esprit refers to what is generally known as "morale". It is a measure of the extent to which teachers feel that tasks are accomplished and social needs are being met.
- (d) Intimacy refers to the extent to which teachers enjoy friendly social relations with each other inside and outside the school.

Principal's Behavior

- (e) Aloofness refers to the extent to which a principal's behavior

is formal and impersonal. High Aloofness is characterized by strict adherence to rules and regulations and cool, business-like behavior; there is very little overt friendliness and personal contact between principal and teachers.

- (f) Production Emphasis refers to behavior of the principal which is directed towards goal achievement and task accomplishment. It is a measure of the extent to which a principal makes scheduling decisions for classes and teachers, of the closeness with which he supervises his staff, and of the extent to which he stresses the importance of goal achievement.
- (g) Thrust refers to the extent to which behavior by a principal is characterized by his evident effort to move the organization in a goal-oriented direction through good personal example. The principal who is high in Thrust is friendly, approachable, sets a good example of hard work, uses constructive criticism, helps teachers with their difficulties, and informs teachers of new developments in the field of education.
- (h) Consideration refers to the behavior of a principal related to general goodwill and friendliness in his relations with others. It is a measure of the extent to which a principal is interested in assisting teachers with the satisfaction of their personal needs, over and above the call of duty.

4. Morale is defined as:

. . . a composite of attitudes, feelings, expectations, and predispositions . . . of high school students in relation to

their high school in general, their opinions of the value of a high school education, and various other elements peculiar to their high school situation including the persons associated with the schools and the goals of the institutions.⁵

A measure of the student morale of a school will be indicated by the mean score achieved by a school on the morale scale devised by Coster.⁶

IV. ASSUMPTIONS

In carrying out the investigation a number of assumptions were made regarding the data and statistical procedures utilized in this research project.

First, it was assumed that the student sample used was adequate and representative of the total school sample to warrant drawing conclusions regarding the total student body in the school.

Second, it was assumed that the size of sample would be adequate to reveal statistically significant results.

Third, it was assumed that the responses of students on the questionnaire were truly unbiased responses. Since the student questionnaires were not administered by the investigator himself but by a student appointee, the investigator had no alternative but to assume that they were administered according to the instructions enclosed.

Fourth, it was assumed that the scores obtained on the OCDQ's were truly representative of the principal-teacher relationship existing

⁵John K. Coster, "Factors Related to Morale in Secondary Schools," (unpublished Ph. D. Thesis, Yale University, New Haven, 1954), p. 5.

⁶Ibid., p. 201. For a copy of the scale refer to Appendix B.

in a school at the given time.

Fifth, it was assumed that the final sample of forty-seven schools used in this study was not a biased sample of the sixty-eight contacted originally.

V. DELIMITATIONS OF THE STUDY

This study is restricted to a sample of grade ten students in forty-seven schools. The school sample is the number of schools which consented to take part in the study out of a total of sixty-eight which had grade ten students in them, and which participated in the 1965 CSA study.⁷ Consequently, it does not represent any one type of school or any one area. The sample contains schools from all parts of the province of Alberta and contains both city and rural high schools. However, it did turn out that only eight of these were from larger urban centers.

The sample of students used from each school was, wherever possible, sixteen grade ten students chosen at random. However, where fewer than this number were available, the total grade ten class responded to the questionnaire.

VI. LIMITATIONS OF THE STUDY

One possible source of limitation lies in the sample used in this study; it is not a random sample. The schools which participated in

⁷The Organizational Climate Clinics were held in Edmonton and Calgary in March, 1965. Members, 185 in all, participated in the clinic on a voluntary basis.

the 1965 CSA study did so on a voluntary basis. Furthermore, the sixty-eight which were requested to participate in this research were simply all the schools in the original sample which enrolled grade ten students. Out of these sixty-eight schools, only eleven were from larger urban centers; out of the forty-seven schools which eventually agreed to participate, only eight were from larger urban centers. Thus, it was a matter of using data on all the cases available rather than choosing a truly random and representative sample.

VII. ORGANIZATION OF THE THESIS

The present chapter presents a general introduction to the thesis, the problem investigated, its significance, the limitations and delimitations of the project, definitions of terms, and the assumptions which were made.

The next two chapters deal with the theoretical background of the study and the related literature. Chapter II starts with some background theory regarding person to person relationships. This is then developed into a model related to the present study. Following this, six hypotheses are stated. Chapter III presents some related literature and a summary of studies on organizational climate.

The next chapter gives an account of how the data were collected. Included here is a description of the instruments used, the sample selected, methods of data collection, and finally, the statistical treatments which were used to analyze the data.

Chapters V and VI are a statistical presentation of the data.

The former chapter is devoted to a statistical description of the sample whereas the latter is devoted to hypothesis testing.

The final chapter presents a summary of the study, some conclusions, and some implications.

CHAPTER II

THEORETICAL FRAMEWORK

This chapter includes a general background development of the theory and hypotheses of this study. A brief historical treatment concerning the aims and methodology of teaching of early educators is included. Since supervisory practices were and are influenced by research in and philosophy of industrial and personnel management, some of these developments and their offshoots are also presented; moreover, it is shown how development and thinking in education are interwoven with those in industry. Finally, utilizing these as a base, the theory of this study is developed and the hypotheses are stated.

I. GENERAL BACKGROUND

The relevance of a large part of the material in this first section dealing with general background might not be immediately evident. However, it was considered advisable to include it at this point since much of it led to the studies of Kahn and Katz--studies which are of basic significance to the development of the theory for this research.

As a preamble to the review of background literature and to the development of a theoretical background, the following quotation is apropos:

The manifest function of education in the public schools is to produce changes in children--changes in knowledge, skills, attitudes and behaviors. There is a great variation in the convictions held by various individuals as to what knowledge, skills, attitudes and behaviors are desirable and which ones are objectionable. Nevertheless, any evaluation

as to what is good or bad in education must be based, in the final analysis, on the degree to which the school produces those changes in children which are designed by the society in which it operates. This applies to any aspect of education, be it the realm of administration, curriculum, supervision, finance, school plant or teacher preparation.¹

Thus, educating youth is conceived to be primarily a matter of producing change in the individual in a direction which is perceived to be desirable.

The thinking regarding the factors which produced these desirable changes vacillated from position to position in the last three-quarters of a century. Up to and including the late 1800's, appropriate purposes of and methods for education were to be discovered by philosophical or scholarly inquiry. There was little specialized knowledge and skill involved in the educational process--teaching was defined simply as making the pupil master small daily doses of the accumulated knowledge. The nature of the individual or the effectiveness of different teaching methods were of secondary importance; there was little concern for experimentation regarding any of those factors which are now considered to be important concomitants of good teaching and learning, such as is the concern of this research.

With the beginning of the 1900's certain social and economic conditions forced educators to modify their modes and trends of thinking regarding goals and method of teaching. The country was swept with values obtaining directly from standards and advances pertinent to the

¹B. T. Keeler and J. H. M. Andrews, "The Leader Behavior of Principals, Staff Morale and Productivity," The Alberta Journal of Educational Research, IX (September, 1963), p. 179.

business and industrial world. The economic theory of laissez-faire practice in trade and the philosophy of personal freedom and equality were the guiding principles of society. Practices developed in industry were admired for their efficiency and were considered to be directly applicable to the field of educational administration. Consequently, from this point until the present, advances in educational administration were influenced by thinking and developments made in industrial and personnel management.

One of the earliest industrial developments which had an influence on supervisory practices was the theory of Scientific Management. Frederick W. Taylor, who was the central contributor to the theory of Scientific Management, wrote that man is motivated mainly by two incentives: those of fear of hunger and those of material gain.² He stated that man will perform at levels which are close to maximum solely on the basis of the desire to survive and the desire to gain materially. Consequently, all that management needed to do was determine scientifically the most efficient way of performing a job and the rest would take care of itself. The concern for climate and person to person relations were at a minimum here; it was felt that production was governed by conditions external to personnel relations. This emphasis on efficiency was also evident in the field of education--emphasis on the efficiency of learning, teaching, and administration. Correlatively, concern for the personal well-being of student and teaching personnel was at a

²Frederick W. Taylor, Scientific Management (New York: Harper, 1911).

minimum.

It is as a direct outgrowth of Scientific Management that the Human Relations era came into being. While trying to establish the maximum level of production at the Hawthorne works by altering the amount of light provided, the engineers found that the results in production did not vary, as expected, according to the increase or decrease in illumination. Mayo, Roethlisberger, and others³ on pursuing the experiment found that, to their amazement, productivity continued to increase even when illumination was decreased. It only dropped off after the light became so dim that workers could not see properly. As a result of these and similar studies it was concluded that:

Increased production was the result of the changed social situation of the workers, modification in their level of psychological satisfaction, and new patterns of social interaction, brought about by putting them into the experiment room and the special attention involved. The discovery of the significance of "social factors" was to become the major finding of the Hawthorne studies.⁴

This concern about the "social factors" affecting worker production initiated what is called the Human Relations period.

In contrast to Classical Theory, Human Relations emphasized the emotional, unplanned, non-rational elements in organizational behavior. It discovered the significance of friendship and social groupings of workers for the organization. It also pointed out the importance of leadership in the organization and of emotional communication and participation.⁵

³ F. J. Roethlisberger and W. J. Dickson, Management and the Worker (Cambridge: Harvard University Press, 1939).

⁴ Amitai Etzioni, Modern Organizations (Englewood Cliff: Prentice-Hall, Inc., 1964), p. 33.

⁵ Ibid., p. 20.

The unfortunate part about this movement is that it swung over too far in the direction of human relations--good human relations at all costs, even at the cost of producing results.

Just as with the Scientific Management movement, the ideas and practices of the Human Relations era were also adopted by educators, and as in industry, they too swung over too far in the direction of human relations--human relations at the cost of good management, goal achievement and efficient leadership.

However, there were many people who maintained reasonable perspective throughout this movement. They saw that, in spite of the desirability of maintaining group satisfaction, goals were an equally important factor. Roethlisberger and Dickson in 1939 observed: "An industrial organization may be regarded as performing two major functions, that of producing a product and that of creating and distributing satisfaction among the individual members of the organization."⁶

Homans, in discussing the leader and the use of authority states the following regarding group goals and purposes:

Authority--the acceptance of orders--and control--obedience to the norms of the group--are not different in kind from one another but are two forms of the same process. And the job of a leader is twofold: (a) to attain the purposes of the group, and (b) in so doing to maintain a balance of incentives, both reward and punishment, sufficient to induce his followers to obey.⁷

⁶F. J. Roethlisberger and William J. Dickson, Management and the Worker, p. 522, cited by Richard C. Lonsdale, "Maintaining the Organization in Dynamic Equilibrium," Behavioral Science and Educational Administration (Chicago: The University of Chicago Press, 1964), p. 144.

⁷George C. Homans, The Human Group, (New York: Harcourt, Brace & Co., 1950), p. 423.

From here on, studies of organizational behavior took several forms; some studied leadership behavior, others studied role theory and role dimensions, and some studied the morale of members of an organization and its effect on organizational output. Studies in leadership behavior are best exemplified by those done in the late 1940's and early 1950's by the Ohio State University Personnel Research Board. In its studies the "Leadership Behavior Description Questionnaire" was developed as a tool for assessing two dimensions of leadership; Initiating Structure in Interaction and Consideration. Halpin defined the former as referring to the behavior of the leader "in delineating the relationship between himself and members of the work-group, and in endeavouring to establish well-defined patterns of organization, channels of communication and methods of procedure."⁸ Consideration he described as referring to "behavior indicative of friendship, mutual trust, respect, and warmth in the relationship between the leader and the members of his staff."⁹ Results of work done with Air Force personnel and superintendents of schools showed that: "Effective or desirable leadership behavior is characterized by high scores on both Initiating Structure and Consideration. Conversely, ineffective or undesirable leadership behavior is marked by low scores on both dimensions."¹⁰

⁸Andrew W. Halpin. The Leadership Behavior of School Superintendents, (Columbus: College of Education, Ohio State University, 1956), p. 4.

⁹Ibid.

¹⁰Ibid., p. 79.

Getzels and Guba and later Getzels and Thelen proposed a model to explain the social process that derives in a school system.¹¹ This model depicts the social system as being comprised of two dimensions: the nomothetic which consists of institutions, roles and expectations; and the idiographic which consists of the individual, his personality, and his needs-dispositions. One is the institutional dimension and the other the personal dimension. A person in an administrative position will function in accordance with what he perceives his function to be: that of furthering the goals of the institution; that of furthering the satisfaction of the workers in the institution; or, trying to resolve the importance of both, that is, following the transactional style of leadership.

The two different methods of attacking leader or administrator behavior described above are concerned greatly with administrator-teacher behavior. Although it does not directly include the student, the mention of these is important since, if not directly then indirectly the implication is that students tend to benefit from a wholesome teacher-administrator relationship.

The difficulties associated with studies of morale lie in the confusion associated with the meaning, and consequently interpretation of the findings, of the term morale. Lonsdale states that some of the meanings

¹¹See Jacob W. Getzels, "Conflict and Role Behavior in the Educational Setting," in Readings in the Social Psychology of Education, (edited by W. W. Charters, Jr., and N. L. Gage), (Boston: Allyn & Bacon, 1963), or Jacob W. Getzels and Herbert A. Thelen, "The Classroom Group as a Unique Social System," in National Society for the Study of Education, The Dynamics of Instructional Groups, (Chicago: The University of Chicago Press, 1960), Chapter 4.

associated with the term "morale" are as follows: "absence of conflict," "collection of job-related attitudes," "ego-involvement in one's job," "feeling of happiness," "feeling of togetherness," "freedom from restraint in action toward a group goal," "generalized feeling state," "good personal adjustment," "motivation and incentive," "personal acceptance of goals," "we-feeling or cohesiveness of group," and "zeal with which goal-directed activity is carried out."¹² He then proceeds to define morale as follows:

Morale is a feeling of participants in an organization stemming from a combination of (a) perceived productivity or progress toward the achievement of the tasks of the organization, and (b) perceived job satisfaction or the satisfaction of individual needs through the interaction of the participant in his role within the work group and the total organization. Further, high morale is the participant's perception of a successful task-needs integration.¹³

Since high morale is associated with the participant's perception of the "consummation of administrative purpose" he suggests that "the measurement of morale consists in measuring the participant's perception of the accomplishment of the two major purposes of the organization." To the writer, it would seem that an inherent weakness of this type of approach to the meaning of morale, measurement of morale and achieving organizational goals is that one is measuring perceived accomplishments rather than actual accomplishment--a certain degree of objectivity would

¹²Richard C. Lonsdale, "Maintaining the Organization in Dynamic Equilibrium," in National Society for the Study of Education, Behavioral Science and Educational Administration (Chicago: The University of Chicago Press, 1964), Chapter 7.

¹³Ibid., pp. 165-166.

appear desirable in measuring the attainment of ends.

The theory that leader behavior affects all of the individuals down the line who come under the influence of the leader is brought out in some of the literature and studies mentioned below. A statement made by the American Association of School Administrators is: "The security of the staff can hardly be separated from that of the administrator. It is often said that the insecure feelings of a school superintendent are passed on in many ways from him to the staff, and from the staff to the pupils."¹⁴ Blau and Scott write:

Recent studies carried out in organizational settings indicate that authoritarian styles of supervision lessen work satisfaction and productivity . . . Closeness of supervision was inversely related to productivity. Group productivity was negatively affected not only if workers were closely supervised by their foremen, but also if foremen were closely supervised by their supervisors; apparently pressure was transmitted from level to level.¹⁵

Berelson and Steiner express a similar idea when they state: "The leader's style of leadership tends to be influence by the style in which he himself is led."¹⁶

And finally, Kahn and Katz report findings of research which have a most direct bearing on this study, that is, that style of supervision and climate is passed on from echelon to echelon in the administrative hierarchy. Thus:

¹⁴American Association of School Administrators, Staff Relations in School Administration, Washington, 1955.

¹⁵Peter M. Blau and W. P. Scott, Formal Organizations: A Comprehensive Approach (San Francisco: Chandler Publishing Company), p. 150.

¹⁶Berelson and Steiner, Human Behavior: An Inventory of Scientific Findings (New York: Harcourt, Brace & World, Inc., 1964), p. 376.

There is a great deal of evidence that this factor of closeness of supervision, which is very important, is by no means determined at the first level of supervision. Rather, the first level supervisor tends to offer to his men the style of supervision which he experiences with his own supervisor. Or to put it another way, the style of supervision which is characteristic of first-level supervisors reflects in considerable degree the organizational climate which exists at higher levels in the management hierarchy. Among the findings which bear out this interpretation are the following: In the insurance study the low producing supervisors reported that they were under closer supervision from above than did the high producing supervisors . . . In the agricultural equipment factory foremen of high-producing sections indicated relatively more freedom or scope of authority. They state that they were able to plan their own work as much and as far ahead as they wanted to . . .¹⁷

Again,

There is additional analysis which bears on the notion that supervisory behavior at the first level is conditioned in great degree by practices of higher management. The general hypothesis was that the relationship between the behavior of first-level supervisors and the attitudes of their employees are importantly conditioned by the organizational milieu in which the first-level supervisors are functioning. . .¹⁸

And,

There is evidence that the quality of employee-orientation, like closeness of supervision, is in part determined by organizational characteristics and is not merely the reflection of personality traits. For example, the tractor foremen who were reported by their men to make a practice of explaining in advance any changes in the job situation said that they were similarly treated by their own supervisors. The replication of supervisory behavior of successive echelons of large organizations is a phenomenon which deserves further study . . .¹⁹

¹⁷Robert L. Kahn and Daniel Katz, "Leadership Practices in Relation to Productivity and Morale," in Group Dynamics by Dorwin Cartwright and Alvin Zander, (editors), (Evanston, Illinois; Row, Peterson and Company, 1960), pp. 560-561. (*italics added*)

¹⁸Ibid., pp. 560-561.

¹⁹Ibid., p. 564.

These last few examples lead directly to the theory of this study.

II. THEORY OF THIS STUDY

In preceding paragraphs it was shown that the productivity and attitude of the workers are directly related to the type of supervision to which these workers are exposed; further, that as these first-level supervisors supervise, they set up a climate similar to the climate which exists at higher levels in the management hierarchy. Extending these findings by analogy to the field of education, it can be theorized that the situation in a school organization may be as is conceptualized in Figure 1. The climate of a school as determined by principal-teacher

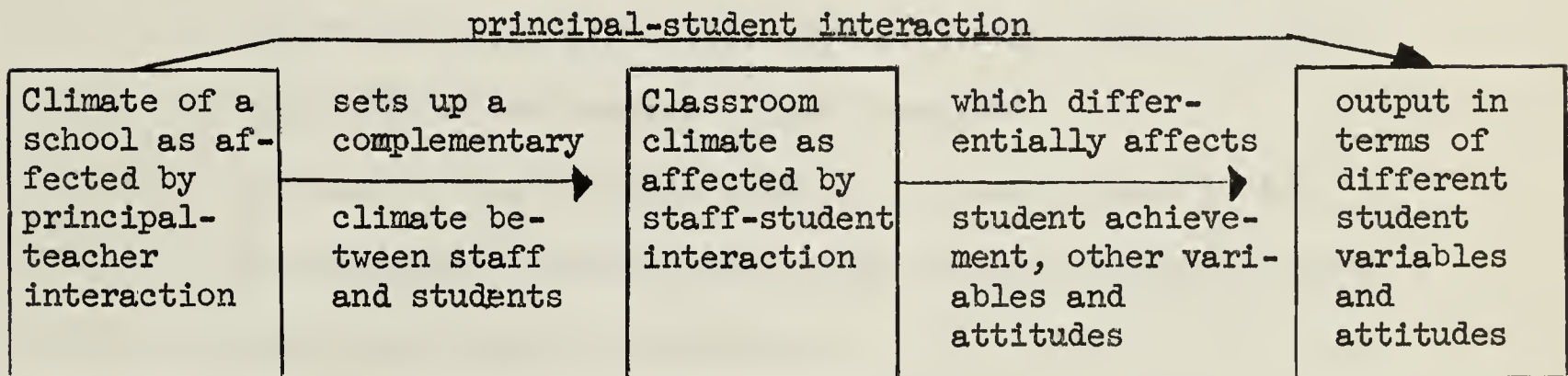


FIGURE 1

SCHOOL CLIMATE, CLASSROOM CLIMATE AND THEIR EFFECTS ON DIFFERENT STUDENT VARIABLES AND ATTITUDES

interaction sets up a complementary climate between staff and students which differentially affects student achievement, other variables and attitudes. Since the OCDQ can be taken to measure certain aspects of teacher-principal relationships, and these measured in terms of subtest scores (Disengagement, Hindrance, Esprit, Intimacy, Aloofness, Production Emphasis, Thrust and Consideration), it is hypothesized in this study that

different subtests relate differently to different student variables and attitudes; further, that different subtests combine in different weights to predict the effects of school climate on student variables and attitudes.

III. HYPOTHESES

The following are the six major hypotheses resulting from the theoretical design discussed in this chapter.

1. Subtests of the OCDQ are related to student morale.
2. Subtests of the OCDQ are related to student attitudes towards the teachers, towards the school, towards the school program, towards the appropriateness of school work, towards future expectations and towards social acceptance.
3. Subtests of the OCDQ are related to student rated school effectiveness, student rated teacher effectiveness, and student rated teacher likeability.
4. Subtests of the OCDQ are related to student rated principal effectiveness.
5. Subtests of the OCDQ are related to student school attendance and to student drop-out rate.
6. Certain subtests of the OCDQ are better predictors than others of student morale, attitudes, school attendance and drop-out rate, ratings of school, ratings of teacher and principal effectiveness and ratings of teacher likeability.

CHAPTER III

RELATED LITERATURE

This chapter is devoted to a treatment of literature pertaining directly to climate as is found in a classroom or in an organizational setting. The first section deals with classroom climate studies. The second section treats organizational climate studies which have bearing on the problem, and the third section examines some recent research which utilized the OCDQ.

I. CLASSROOM CLIMATE STUDIES

The early studies of classroom climate took the form of examining pupil-pupil or pupil-teacher interaction within the classroom. One of the first research projects in this area was done by Dorothy S. Thomas and her associates.¹ The study involved first, observing a single child and plotting his actual movements on a floor plan of the nursery classroom; second, recording every physical contact made by the child and classifying it according to the kind of contact (hit, pull, caress, and so on); third, using a technique involving stenographic records of the child's vocalization; and fourth, observing the formation of social groups within the classroom.

An extension of this type of work was carried out by Anderson and

¹Dorothy S. Thomas and associates, "Some New Techniques for Studying Social Behavior," Child Development Monograph, 1929, 1.

his colleagues who studied the effects on students of dominative and integrative behavior on the part of the teacher or other students.² They found that dominative behavior in one child tended to incite dominative behavior in his companion, and that socially integrative behavior tended to elicit socially integrative behavior in the companion. Furthermore, it was found that the children with the more integrative teacher showed significantly lower frequencies of looking up from seat work, playing with foreign objects, and exhibiting both conforming and nonconforming behavior. The children with the more integrative teacher were significantly higher in frequencies in several categories representing spontaneity and initiative and social contributions both voluntary and in response to others. The dominant teacher maintained the conflict, at the same time stifling initiative and spontaneity of the children.

In a study carried out in 1951, Withal observed a group of seventh grade pupils in classrooms with different teachers and found that different teachers produced a different climate with the same group of students.³

Flanders used the instrument developed by Withal centering around Learner Centered and Teacher Centered teacher behavior--where the intent of the teacher to support the student or himself is a crucial distinction. He found that: first, teacher behavior characterized as directive,

²H. H. Anderson and associates, Studies of Classroom Personality, I, II, III, Applied Psychology Monographs of the American Psychological Association (Stanford: Stanford University Press, 1945, 1946).

³J. Withal, "The Development of a Climate Index, Journal of Educational Research, 1951, 45, 93-99.

demanding, deprecating by the use of private criteria, and, in general, teacher supporting elicits student behaviors of hostility toward self or the teacher, withdrawal, apathy, aggressiveness and even emotional disintegration; and second, teacher behavior characterized as acceptant, problem oriented, evaluative or critical by way of public criteria, and in general, student supportive, elicits student behavior of problem orientation, decreased interpersonal anxiety, integration and even emotional readjustment.⁴

Lewin makes the statement, "It is well known that the amount of success a teacher has in the classroom depends not only on her skill but to a great extent on the atmosphere she creates."⁵ To test this hypothesis mask making clubs were set up which were equated on leadership and interpersonal relations. The democratic group chose freely what they were going to do; the autocratic group were told what to do. There was a much greater impact on the members of the group by the leader in autocracy than in democracy and the approach was much more ascendent and less matter-of-fact. In the autocratic group only one way of action was open to the student--that chosen by the leader; in the democratic group, several possible means were open to the student. The laissez-faire group was left to itself and received no direction from the leader.

On the whole, the results showed that the type of control in the

⁴N. A. Flanders, "Personal Social Anxiety as a Factor in Experimental Learning Situation," Journal of Educational Research, 1951, 45, 100-110.

⁵Kurt Lewin, Resolving Social Conflict, (New York: Harper and Brothers Publishers, 1948), p. 74.

three atmospheres governed the child to child relations as well as the child to leader relations. In the autocratic group the children were less matter-of-fact, less co-operative, and less submissive toward their equals, but more submissive to their superior than the democracy. The tension was greater in the autocratic atmosphere.

In summary, examples were presented of studies which investigated classroom climate and its effect on student behavior. Results of one study showed that dominative behavior on the part of the teacher induced the same behavior in the student whereas, integrative behavior produced more desirable behavior in a student. Another research showed that different teachers produced different classroom climates with the same group of students. Other studies which were refinements or extensions of those mentioned tended to support the findings that different teacher behavior differently influences classroom climate, student behavior and attitudes; integrative or democratic behavior elicits favorable student responses whereas dominative or autocratic behavior elicits unfavorable student responses.

II. ORGANIZATIONAL CLIMATE STUDIES

The classroom climate studies described above were limited to observing different aspects of teacher-student interaction in the classroom and noting the results of these interactions. However, recent thinking and research related to climate tended to extend the concept to involve the organization as a whole rather than a part of it. Lonsdale aptly conveys the gist of the matter when he states:

. . . organizational climate might be defined as the global assessment of the interaction between the task-achievement dimension within the organization, or, in other words, of the extent of the task-needs integration. In general usage the term has a psychological flavor which reflects more concern with the needs-satisfaction dimension than with the task achievement dimension, but the meaning that gives relative equal treatment to both is preferred.⁶

Halpin and Croft, in trying to convey their interpretation of school organizational climate state: "The Organizational Climate can be construed as the organizational 'personality' of a school; figuratively, 'personality' is to the individual what 'climate' is to the organization."⁷ Utilizing these concepts of climate, two studies are presented examining aspects of organizational climate.

One interesting climate study was carried out by Mathews in nine western hospitals in the United States.⁸ She measured five dimensions of administrative climate (decision-making, leadership, goal-integration, influence, and personal relations) on a continuum ranging from a technological philosophy of administration to a social philosophy of administration. As she used the term, a technological philosophy of administration refers to the belief that "a few persons at the top of the hierarchy should lead those at the bottom and the subordinates are obliged to obey their superiors, to carry out orders and follow rules

⁶Lonsdale, op. cit., p. 166.

⁷Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (The University of Chicago: Midwest Administration Center, 1963), p. 1.

⁸B. Phelps Mathews, "Inconsistency: A Complex Problem in Administration," Hospital Administration, VII (Fall, 1962), pp. 21-35.

and regulations which have been set forth."⁹ A social philosophy of administration is defined as one where it is believed that "employees are decision makers and problem solvers; that each employee is seeking to utilize his potential capacities and that each is looking for opportunities to express his creative abilities . . . Both the establishment of work goals and agreement on the activities and processes for achieving them involve the participation of the workers."¹⁰ The results showed that important contradictions existed in the administrative philosophies of these hospitals; they were socially oriented in some dimensions and technologically oriented in others. Administrators tended to be most socially oriented in the Decision-Making dimension and least socially oriented in the Influence dimension. Further, she also found a significant correlation between the tenure of nurses and the degree of philosophic contradictions; hospitals at either end of the continuum (clearly technologically oriented or socially oriented) showed the greatest mean number of years of tenure, whereas, hospitals falling towards the middle of the continuum had the lowest tenure. Thus tenure was related to the degree of clarity of administrative orientation regardless of the type of orientation. The generalization which could be drawn from this study might be stated as follows: hospitals with a clearly defined philosophical orientation may draw personnel attracted by that certain kind of orientation, or it may be that the nurses in the

⁹Ibid., p. 22.

¹⁰Ibid., p. 23.

hospitals with more philosophical conflicts reject that kind of organizational climate by leaving it.

Stern and his associates developed the "Activities Index" to measure individual needs and the "College Characteristic Index" (CCI) to measure organizational press--where press is "an external situational counterpart to the internal personality needs . . . and . . . refers to the phenomenological world of the individual, the unique and inevitably private view which each person has of the events in which he takes part."¹¹ The instrument was used by them to measure the pressive aspect of the organizational climate of sixty-nine colleges and universities. In analyzing the findings, the following six factors were derived describing the effect of the organizational climate of those institutions upon students; intellectual orientation, social effectiveness, play, friendliness, constraint, and dominance-submission. In terms of these factors, liberal-arts colleges were characterized by high scores on intellectual orientation; liberal-arts colleges and several select denominational colleges on high social effectiveness; several large state universities and private universities on play; a mixed group of schools on friendliness; denominational colleges on constraint (compliance); and state teachers' colleges on dominance-submission. The main distinguishing factor in this study was the varying levels of intellectual press amongst the various colleges and universities.

¹¹ George G. Stern, "Characteristics of the Intellectual Climate in College Environments," Harvard Educational Review, XXXI (Winter, 1963), pp. 5-41.

III. RECENT OCDQ RESEARCH

Two studies of organizational climate were summarized in the previous section. In this section are included analyses of recent researches carried out utilizing the OCDQ, the instrument developed for the specific purpose of measuring school organizational climate.

In the process of the development of the instrument, Halpin and Croft administered the Organizational Climate Description Questionnaire form IV to seventy-one elementary schools chosen from six different regions of the United States.¹² The item responses obtained from 1,151 respondents were factor analyzed and subjected to other statistical treatment and theoretical analyses which finally resulted in the definition of eight subtests. Four of these subtests pertain primarily to characteristics of the group as a group: Disengagement, Hindrance, Esprit, and Intimacy. The other four pertain primarily to the principal's behavior as a leader: Aloofness, Production Emphasis, Thrust and Consideration.

The research also yielded a categorization of subtest profiles along a continuum according to the degree of "openness" or "closedness" of the organizational climate in the school. The six different categories of schools are those exemplified by (1) the Open Climate, (2) the Autonomous Climate, (3) the Controlled Climate, (4) the Familiar Climate,

¹²Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (The University of Chicago: Midwest Administration Center, 1963), p. 6, also Halpin and Croft, "The Organizational Climate of Schools," Administrator's Notebook, XI (March, 1963).

(5) the Paternal Climate and (6) the Closed Climate. Three factors were extracted which they found useful in explaining scores obtained by the different schools on the OCDQ subtests. These are Social Needs, Esprit, Satisfaction and Social Control.

Feldvebel, utilizing the OCDQ, carried out a study at the University of Chicago regarding organizational climate, social class and educational output.¹³ Schools within the area of Northeastern Illinois Metropolitan Area were divided into three strata based upon rank derived from four socio-economic characteristics. In each of thirty schools data were collected with respect to the socio-economic status, pupil achievement levels, and organizational climate. The findings showed that neither the Open nor the Closed climate showed any tendency to be associated with the social class level of a community. However, of the subtests, "Hindrance and Consideration, which describe the principal's behavior, accounted for a majority of the variance in pupil achievement level. In other words, Hindrance and Consideration seem to be significantly associated with the social class of the community."¹⁴ Analysis of covariance was used to test the relationship between organizational climate and pupil achievement level, with pupil achievement treated as the criterion, organizational climate as the independent variable and socio-economic status as the covariate. The results showed that there

¹³Alexander M. Feldvebel, "Organizational Climate, Social Class, and Educational Output," Administrator's Notebook, XII (April, 1963).

¹⁴Ibid., p. 2.

was no significant relationship between the degree of openness in climate and pupil achievement. However, when organizational climate was broken down into its eight elements or subtests, Production Emphasis and Consideration were significantly associated with pupil achievement.¹⁵ The correlation between pupil achievement and Consideration was .391, significant at the .05 level, and $-.399$ between pupil achievement and Production Emphasis, significant at the .05 level. The correlation between pupil achievement and organizational climate, although non-significant, was $-.271$. In respect to this Feldvebel says:

The consistently negative results in regard to the relationship between the global concept of organizational climate and pupil achievement level suggest that this relationship may be considerably more complex than assumed here.¹⁶

The fact that Feldvebel obtained a negative correlation between organizational climate and achievement is rather surprising and can be questioned on two points: firstly, no covariate control of ability was introduced in the statistical design; and secondly, it is contrary to results of several studies done at the University of Alberta and elsewhere. Contrariwise, it can be hypothesized that the OCDQ does not measure Organizational Climate in the sense that it is usually defined.

For example, in 1961 Keeler studied the interrelationships among leader behavior of principals, staff morale and productivity.¹⁷ One of

¹⁵Ibid.

¹⁶Ibid., p. 4.

¹⁷B. T. Keeler and J. H. M. Andrews, "The Leader Behavior of Principals, Staff Morale and Productivity," The Alberta Journal of Educational Research, IX (September, 1963), pp. 179-191.

the basic hypotheses that Keeler stated was that there is a strong relationship between the behavior of the leader and productivity. This is brought out in the statement:

A third popular assumption is that there is a strong relationship between the behavior of the leader and productivity. This assumption is often made independently of the other two-- that is leader behavior affects productivity without necessarily doing so through morale.¹⁸

The study was carried out in forty-two rural schools in Alberta. The results regarding leader behavior and student achievement were as follows:

All of the statistics give strong support to the hypothesis that leader behavior of the principal of a school, as perceived by his staff, measured by the Leader Behavior Description Questionnaire, is significantly related to productivity of the schools as measured by grade nine departmental examinations with the effect of pupil intelligence held constant.¹⁹

Considering, then, the results of this study and the fact that both Initiating Structure and Consideration of the LBDQ were incorporated into the OCDQ, one treats the results which Feldvebel obtained with some reservation; a positive relationship, at least, would be expected between organizational climate and pupil productivity; or again, the validity of the test is questioned.

A recent paper delivered by Andrews outlines some further studies centered around the OCDQ.²⁰ In conjunction with a clinic which was sponsored jointly by the Council on School Administration of the Alberta

¹⁸Ibid., p. 179.

¹⁹Ibid., p. 188.

²⁰John H. M. Andrews, "Some Validity Studies of the OCDQ" (paper delivered at the conference of the American Educational Research Association, Chicago, February 10, 1965).

Teachers' Association and the Department of Educational Administration of the University of Alberta, Edmonton, rating scales were administered to teachers of 165 schools for the purpose of (1) rating teacher satisfaction, (2) finding teacher rating of principal effectiveness, and (3) finding teacher rating of the effectiveness of the school.

The findings arising from the CSA studies and rating scales were as follows: first, the OCDQ is applicable beyond the elementary school (it was originally standardized on results from elementary schools); second, Teacher Satisfaction showed a strong positive relationship to Climate ($r = .53$) and an even stronger positive relationship to Esprit ($r = .68$); third, in measuring relationship with rated principal effectiveness, Thrust and Rated Principal Effectiveness showed an r of $.84$; fourth, teachers' ratings of School Effectiveness are correlated most highly with Esprit ($r = .59$) and Climate ($r = .53$).

In order to find the relationship between climate and pupil achievement the scores of grade nine students from 95 schools were used to calculate a School Achievement Index. The results showed no relationship between the School Achievement Index and Climate of a school. In addition, of the subtests, Intimacy was the only one which showed any significant correlation ($r = .29$ significant at the $.01$ level with the Achievement Index). On the other hand, Thrust and Production Emphasis showed a small negative correlation, $-.05$ and $-.04$ respectively. The Mean School Achievement Index for each of the Climates was as follows: Open, 47.05; Autonomous, 54.12; Controlled, 47.76; Familiar, 53.84; Paternal, 49.00; and Closed 48.78.

Schmidt related OCDQ subtest scores to the twelve subtests of the

LBDQ - Form XII.²¹ A random sample of 50 schools, stratified by Climate, was used from the study cited above. Forty-seven schools returned completed LBDQ scores. The results were as follows:

With only one exception the significant relationships are as would be expected. The exception is the negative relationship between Superior Orientation and Hindrance . . .

The most surprising finding, however, is the lack of relationship between the subtests named Consideration.²²

Plaxton sought relationships between the personality of the principal as measured by the Myers-Briggs Type Indicator (MBTI) and the OCDQ.²³ Principals from 164 of the 165 schools in the main study mentioned above responded. The results showed "no overall relationship between the principal's personality type and Climate."²⁴ However, "a number of significant differences were found between personality type and OCDQ subtest scores."²⁵

IV. SUMMARY

The first section of this chapter dealt with studies carried out in attempting either to devise scales for measuring classroom climate or

²¹Werner G. Schmidt, "Relationship Between Certain Aspects of Teacher Behavior and Organizational Climate," (Unpublished M. Ed. thesis, University of Alberta, Edmonton, 1965).

²²Andrews, op. cit., p. 24.

²³Robert P. Plaxton, "Relationships Between Principal's Personality and the Organizational Climate of Their Schools," (unpublished M. Ed. thesis, University of Alberta, Edmonton, 1965).

²⁴Andrews, op. cit., p. 25.

²⁵Ibid.

to measure the effects of climate on student behavior. Most of the research cited illustrates that different teacher behavior does indeed elicit different student reactions.

The second section defined organizational climate as a global assessment of the interaction between the task-achievement dimension and the needs-satisfaction dimension within the organization. One study utilizing the concept of organizational climate found that different hospital personnel are attracted by different climates and secondly, that nurses rejected a hospital climate which showed philosophical conflicts by leaving it. A second research showed that varying levels of intellectual press existed amongst the various colleges and universities.

Studies utilizing the OCDQ are included in the third section. It was reported that climate did not have any tendency to be associated with the social class level of a community, the achievement of a class, or the principal's personality type. However, it was found that certain subtests did show significant relationships with the criterion variables mentioned. It appears from these studies that subtests of the OCDQ are better measures for these purposes than the overall climate categorizations.

CHAPTER IV

INSTRUMENTATION AND DATA COLLECTION

I. INSTRUMENTATION

Two instruments were used in collecting the data. The first was the Organizational Climate Description Questionnaire which yielded a measure of principal-teacher relationships. Halpin and Croft state that their initial aim in constructing the Organizational Climate Description Questionnaire was to devise an instrument which would separate schools into different school climates only; no evaluation of different organizational climates was to be made. However, as they progressed in their research, they found that the results proved to be so vivid that they could not help but make evaluative judgements. Thus:

When we started the project we vowed to be extremely wary about evaluating different Organizational Climates: our own experience had shown that groups could achieve "fates" in a variety of ways. Accordingly, we set for ourselves an objective more limited than evaluation: merely the description of a school's Organizational Climate. Yet the more we worked with the findings, the more did judgements about the Climates force themselves upon our attention. The difference in the quality of different Climates became too vivid and too compelling to be ignored.¹

Moreover, they were able to identify six Organizational Climates, and found that "these could be ranked on a continuum defined at one end as

¹Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (The University of Chicago: Midwest Administration Center, 1963), p. 6.

Open, at the other, as Closed."² The Open climate was identified as the most consonant with a good school atmosphere. Thus, "By our definition the Open climate is the most desirable,"³ or, "In evaluating the climate it becomes clear to us that the 'best' climate is the Open one."⁴ In speaking of the Closed climate Halpin and Croft summarized it by stating: "This climate characterizes an organization for which the best prescription is radical surgery."⁵

Recent studies⁶ carried out at the University of Alberta indicate that the implied meanings of the theoretical categorizations of Organizational Climate do not seem to be borne out in practice, and that strict adherence to the terminology could be misleading. Andrews concluded:

From an assessment of the evidence presented it is concluded that the overall Climate categorizations may be considered as reasonably valid descriptions of commonly occurring patterns of certain aspects of principal-staff interaction. The term Organizational Climate, however, is so much broader than the actual measures as to be quite misleading. Furthermore, the concepts Open and Closed, applied by analogy from psychology, appear to have little meaning except in terms of the description of the profiles they represent. In fact the vagueness of the concept Organizational Climate and of the names of the six types of Climate are regarded as detractions from the validity of OCDQ. The only apparent valid meaning to be attached to the Climates is that they are commonly occurring patterns of scores on the

²Ibid., p. 2.

³Ibid., p. 4.

⁴Ibid., p. 73.

⁵Ibid., p. 66.

⁶ John H. M. Andrews, "Some Validity of the OCDQ" (paper delivered at the conference of the American Research Association, Chicago, February 10, 1965).

subtests. From the strictly pragmatic point of view this conclusion is supported by the fact that the overall Climate does not predict anything that the subtests do not predict better. Indeed, in many relationships the Climate variable acts merely as a somewhat blurred Esprit score.⁷

The subtests themselves, however, are much more useful tools to work with.

As Andrews goes on to say:

A much more positive conclusion is warranted regarding the subtests. The evidence included [in the studies] a large number of significant relationships with other variables, a tribute to the theoretical importance of the concepts being measured and to the internal consistency of the subtests

On the present evidence, then, it is concluded that the subtests of the Organizational Climate Description Questionnaire provide reasonably valid measures of important aspects of the leadership of the school principal in a perspective of interaction with his staff.⁸

Consequently, subtests were used in this study to obtain a measure of principal-teacher relationships.

The test builders did not validate the instrument formally; they trusted that its validity lay in good theoretical and statistical bases. Furthermore, they were loath to use some external criterion such as ratings of superintendents since these sources have proven to be relatively unreliable criteria of effectiveness. To summarize the thinking of the writers, they are waiting for the accumulation of data for empirical validation. Three types of reliability estimates (split-half coefficients of reliability, correlation scores of the odd numbered and the even numbered respondents in each school and communality estimates

⁷Ibid., p. 37.

⁸Ibid., pp. 37-78.

for three-factor rotational solution) were performed on each of the sub-tests respectively. For the first, reliability coefficients ran from .26 to .84; for the second, from .49 to .76; and for the third, from .44 to .73.

For purposes of measuring student attitudes and student morale the instrument developed by Coster entitled "How I Feel About My High School" was used.⁹ The instrument¹⁰ consists of twenty-seven attitudinal items-- seven items related to attitudes towards teachers, two items related to attitudes towards the appropriateness of school work, three items related to attitudes related to future expectations, four items related to attitudes related to social acceptance, and three items related to miscellaneous attitudes.

It appears that reasonably satisfactory precautions were taken during the development of the instrument to assure that it was valid and reliable. A frequency count of each word used in the test was determined to assure that the vocabulary was appropriate for high school students. Secondly, the instrument was administered to approximately three hundred high school students to determine its efficacy. From this, the reliability of the scale was obtained by determining the coefficient of correlation between the sub-total scores made on odd-even numbered items. A

⁹John K. Coster, "Factors Related to School Morale in Secondary Schools," (unpublished Ph. D. thesis, Yale University, New Haven, 1954), p. 201. Permission to use the instrument was obtained from John K. Coster, The University of Nebraska, Department of Agricultural Education, Lincoln, Nebraska.

¹⁰Refer to Appendix B for instrument.

value of .84 was obtained by using Pearson r . This was raised to .91 using Spearman-Brown's formula to determine the reliability coefficient for the whole test.

In a trial run which Coster made on some 300 high school students the items were scored by arbitrarily assigning a scale value of five to the responses judged to represent the most favorable attitude, and a value of one to the least favorable attitude. Scale values of four, three and two were assigned to the remaining responses. Although the method of reciprocal averages was used to score the items in the final analysis itself, for purposes of this study, the scale of five for the most favorable attitude to one for the least favorable attitude was utilized.

The remaining four items rating school effectiveness, teacher effectiveness, principal effectiveness and teacher likeability were developed by the investigator. The items were scored on a six-point scale, assigning six to the most favorable response and one to the least favorable response. The four items developed by the investigator were assumed to have face validity.

To determine the reliability of the total questionnaire the test-retest method was used. The school chosen for this purpose was located in a large urban centre. Approximately four weeks after the first administration of the questionnaire, it was readministered to the same group of sixteen students who participated originally. The reliability coefficient obtained from this test-retest method was .961. Hence it can be stated that 96 per cent of the variation in the measurements for this particular group is attributable to variation in true score and the remaining 4 per

cent being attributable to error.

Information regarding attendance and student drop-out was obtained directly from the principals via mailed questionnaires.

In summary, the OCDQ was administered to obtain a measure of principal-teacher relationship. A scale called "How I Feel About My High School" was administered to obtain a measure of student school morale and individual attitudes. The sum of scores on individual attitudinal items averaged out over the number of students who responded in a school yielded an attitudinal score for the school. The sum of scores on all twenty-seven items yielded a measure of student morale. This summed and averaged over the number of students who responded yielded a school student morale score. The highest possible morale score was 135 while the lowest was twenty-seven.

II. THE SAMPLE

One hundred and eighty-five Alberta schools participated in a CSA clinic on organizational climate in March, 1965. All principals who took part in the clinic and whose schools enrolled grade ten students, sixty-eight in all, were contacted and requested to participate. Out of the sixty-eight schools contacted, fifty-one consented to assist in the study and subsequently returned the student questionnaires mailed to them. Returns, then, were received from seventy-five per cent of the total number of schools contacted; however, four sets of questionnaires were returned after the cut-off date set for the beginning of the processing of data. Consequently, only forty-seven schools were used in the final analysis.

This is sixty-nine per cent of the initial number contacted and ninety-two per cent of those who consented to participate.

Out of the sixty-eight schools initially contacted, only eleven were from major urban centers in Alberta. Since the number which returned data in time to be analyzed was reduced to forty-seven, this also reduced the number of urban participants to eight schools or seventeen per cent of the total sample.

Finally, from each participating school, a sample of sixteen grade ten students was chosen at random to respond to the questionnaire "How I Feel About My High School." If a school had fewer than sixteen grade ten students, all the students in that grade were requested to complete the questionnaires. In all, 439 student responses were received from the forty-seven schools.

Tables I to VIII inclusive outline in tabular form some of the sample characteristics.

Table I illustrates that the kinds of schools included in the sample were predominantly of the grades 1-12 type where $N=23$. The next two most common kinds were of the grades 7-12 and 10-12 type where $N=10$ in each case.

An examination of Table II which shows the distribution of the sizes of schools in the sample reveals that the majority of them were of the ten to twenty-four teacher size. This range included thirty-two schools, which is equal to sixty-eight per cent of the sample.

Table III illustrates that the largest number of principals in the sample have had thirteen to sixteen years of teaching experience. Surprisingly, the next largest group had thirty-two or more years of

TABLE I

NUMBERS AND PERCENTAGES OF SCHOOLS BY TYPE OF SCHOOL

Type of School	Number of Schools	Per Cent of Total Number
Grades 1 - 11	1	2.12
Grades 1 - 12	23	48.94
Grades 7 - 12	10	21.28
Grades 9 - 12	3	6.38
Grades 10 - 12	10	21.28
Total	47	100.00

TABLE II

NUMBERS AND PERCENTAGES OF SCHOOLS BY SIZE OF SCHOOL

Number of Teachers on Staff	Number of Schools	Per Cent of Total Number
4 or fewer	0	0.00
5 - 9	3	6.38
10 - 14	11	23.40
15 - 19	13	27.66
20 - 24	8	17.02
25 - 29	4	8.51
30 - 39	5	10.64
40 - 49	2	4.26
50 or more	1	2.13
Total	47	100.00

experience. It appears that the principals in the sample fall into two groups in terms of teaching experience; one group seems to be made up of principals with a very extensive amount of experience and the other group seems to include principals with a relatively low number of years of experience.

However, when one looks at Table IV illustrating the number of years of experience which the principals had in the capacity of a principal, there does not appear this obvious division into two groups.

An examination of Table V reveals that most of the principals in the sample are not long-established tenure principals. Fifty-seven of them had four or fewer years of tenure, and eighty-one per cent had eight or fewer years of tenure.

However, Table VI shows that the principals are not as "young" in age as they are in tenure. Ten principals fall in the thirty to thirty-four age group, but the remainder are distributed reasonably well in age groups older than thirty-four years.

When one considers the number of years of training of the principals, an examination of Table VII reveals that the principals in the sample might be classed as relatively well-prepared for their work. Thirty-six per cent have four years of training, thirty-eight per cent have five years of training, and twenty-three have six years of training.

Finally, it may be concluded from Table VIII that even though only two principals hold degrees in educational administration, about half the principals are aspiring towards a graduate degree in that they have taken some graduate courses in educational administration. The other half have not taken any graduate courses in educational administration.

TABLE III

NUMBERS AND PERCENTAGES OF PRINCIPALS BY TOTAL NUMBER
OF YEARS OF EXPERIENCE AS TEACHER AND PRINCIPAL

Years of Experience as Teacher and Principal	Number of Principals	Per Cent of Total Number
4 or less	3	6.38
5 - 8	6	12.76
9 - 12	5	10.65
13 - 16	13	27.66
17 - 20	5	10.65
21 - 23	2	4.25
24 - 27	0	0.00
28 - 31	4	8.51
32 or more	9	19.14
Total	47	100.00

TABLE IV

NUMBERS AND PERCENTAGES OF PRINCIPALS BY NUMBER
OF YEARS OF EXPERIENCE AS PRINCIPAL

Years of Experience as Principal	Number of Principals	Per Cent of Total Number
1 year	8	17.02
2 - 3	5	10.65
4 - 6	10	21.25
7 - 9	7	14.88
10 - 12	5	10.65
13 - 15	2	4.26
16 - 18	4	8.51
19 - 20	1	2.13
21 or more	5	10.65
Total	47	100.00

TABLE V
NUMBERS AND PERCENTAGES OF PRINCIPALS BY
LENGTH OF TENURE OF PRINCIPAL

Tenure of Principal	Number of Principals	Per Cent of Total Number
1 year	11	23.40
2 years	5	10.64
3 - 4	11	23.40
5 - 6	6	12.77
7 - 8	5	10.64
9 - 10	3	6.39
11 - 15	1	2.13
16 - 20	4	8.50
21 or more	1	2.13
Total	47	100.00

TABLE VI
NUMBERS AND PERCENTAGES OF PRINCIPALS
BY AGE OF PRINCIPAL

Age of Principal	Number of Principals	Per Cent of Total Number
Under 24 years	0	0.00
25 - 29	2	4.26
30 - 34	10	21.28
35 - 39	9	19.14
40 - 44	6	12.77
45 - 49	8	17.02
50 - 54	3	6.38
55 - 59	6	12.77
60 or more	3	6.38
Total	47	100.00

TABLE VII
NUMBERS AND PERCENTAGES OF PRINCIPALS
BY YEARS OF TRAINING

Years of Training	Number of Principals	Per Cent of Total Number
1 year	0	0.00
2 years	1	2.13
3 years	0	0.00
4 years	17	36.17
5 years	18	38.30
6 years	11	23.40
Total	47	100.00

TABLE VIII
NUMBERS AND PERCENTAGES OF PRINCIPALS BY AMOUNT OF
GRADUATE TRAINING IN EDUCATIONAL ADMINISTRATION

Amount of Graduate Training	Number of Principals	Per Cent of Total Number
No graduate courses in administration	23	48.94
Some courses in administration	22	46.80
Hold a degree in educational administration	2	4.26
Total	47	100.00

III. DATA COLLECTION

To each of the principals of the schools chosen, except those in two large urban centers, an explanatory letter was mailed outlining the purpose of the study and requesting their participation. (In the two large urban centers, permission from the boards had to be obtained prior to engaging in data collection in their systems. In cases where permission was granted, the principals were then contacted.) A self-addressed and stamped card was enclosed which enabled principals to indicate whether or not they were willing to participate in the study.

In the event that the principals indicated that they would participate, they were requested to list names of presidents or secretaries of Student Councils or other student organizations who would be responsible, under the guidance of a teacher, to receive questionnaires, to administer them, and to mail them back to the investigator. Student organizations were asked to do this in order that students responding to questionnaires would be assured of complete anonymity and that their responses would not affect their final marks in exams or their relations with principals and teachers.

Upon receipt of a student's name, questionnaires, directions for drawing a sample and administering the questionnaire, and a self-addressed and stamped envelope were sent to the student. At the same time a letter was sent to the principal requesting him either to appoint a teacher or to act himself as an assistant to the student appointee and to aid in the supervision of the classroom while the questionnaires were being answered.

The student appointee, on the day chosen, drew sixteen names

randomly from the total grade ten population. These sixteen students (or the complete grade ten class if a school had a class of fewer than the specified number of students) completed the questionnaires and returned them to the student appointee who then sealed the package provided and returned it to the investigator.

With the above mentioned letter to the principals, a form was also included requesting them to list the per cent attendance for their grade ten class for the months September to March inclusive of the current school year. At the same time they were requested to list the number of students who dropped out of school during that period of time. Subsequently, total enrolments for the class were obtained from Form A from the files of the Department of Education. From this information the per cent drop-out rate was calculated.

IV. STATISTICAL TECHNIQUES

In the analysis of data, essentially four statistical procedures were utilized. These were chi square, Pearson product-moment correlation, multiple correlation, and analysis of variance for ranked data. This section presents a brief treatment of each of the statistical techniques mentioned.

Chi Square

In this research chi square was used to test the distribution of low and high morale scores among various categories of school and principal characteristics. In many investigations in education and psychology the elements in a sample can be classified into categories representing

one or more characteristics. The classification process consists essentially of identifying the characteristics of each individual in the sample and then enumerating the individuals having been classified in each category.

After the classification had been accomplished, the research worker may be interested in evaluating the discrepancy between the number of sample cases actually observed in each category and the number of sample cases which would be expected in each category on the basis of some hypothesis about the distribution of cases in the population. Chi square is a statistical technique which enables the investigator to evaluate the probability of obtaining differences between the actual and expected frequencies in the categories of one or more classifications as a result of sampling fluctuation.

χ^2 is defined by

$$\chi^2 = \frac{(O - E)^2}{E}$$

where O = observed frequency

E = an expected or theoretical frequency¹¹

Where the data are categorized in a 2 x 2 contingency table chi square is given by the formula

$$\chi^2 = \frac{N(AD - BC)^2}{(A + B)(C + D)(A + C)(B + D)}$$

where the term in the numerator, AD - BC, is the difference between the two cross products, the term in the denominator is the product of the

¹¹George A. Ferguson, Statistical Analysis in Psychology and Education (Toronto: McGraw-Hill Book Company, Inc., 1959), p. 158.

four marginal totals, and the number of degrees of freedom is given by $(R - 1) (C - 1)$.

An important fact to note concerning this statistical technique is that where the expected frequencies are small, the actual sampling distribution of chi square may exhibit marked discontinuity. For one degree of freedom a correction known as Yate's correction for continuity may be applied, but with two or more degrees of freedom Ferguson states that "the error introduced by small expected frequencies is of less consequence than with one degree of freedom. An expectation of not less than two in each cell will permit the estimation of roughly approximate probabilities."¹² However, he goes on to say that where there is no serious distortion of data, frequencies may be combined to produce the required value in each cell.

To test distribution of low and high morale scores among various categories of school and principal characteristics both procedures were utilized, that is, chi square was calculated on the data as shown in the tables, and also on combined data. Both values are stated in the tables involved.

Pearson Product-Moment Correlation

Pearson r is used to determine the amount of co-relation between two variables. In this study it was used to establish the degree of relationship between OCDQ subtest scores and various student variables.

¹²Ibid., p. 172.

Significant values of r are listed in a table or critical values of the correlation coefficient found in Ferguson.¹³ Since Pearson r is a rather common statistical procedure no further treatment of its theory is given at this point.

Multiple Correlation

In determining the degree of correlation between student variables and one or more climate characteristics taken at a time, the multiple correlation technique was used. The essential features of this statistical technique are outlined below.¹⁴

When one is interested in determining the amount of correlation between a criterion variable and two or more predictor variables taken together, one is dealing with a multiple correlation problem. Usually, the best predictors are those which are highly correlated with the criterion but to a minimal extent with each other. As noted in Figure 2, the most

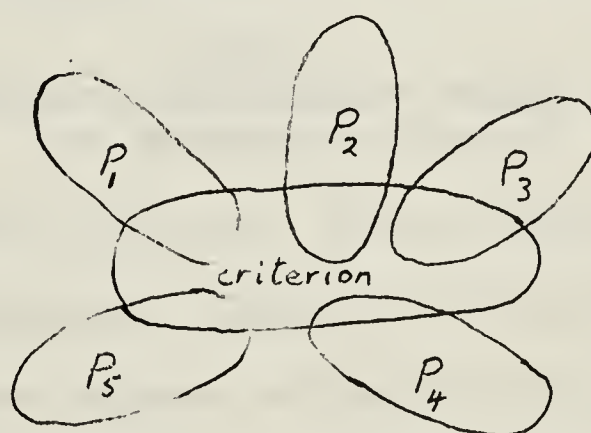


FIGURE 2
CONCEPTUALIZATION OF RELATIONSHIP BETWEEN CRITERION AND
PREDICTOR VARIABLES IN MULTIPLE CORRELATION

¹³Ibid., p. 315.

¹⁴For information on this section the investigator is indebted to: J. P. Guilford, Fundamental Statistics in Psychology and Education (Toronto: McGraw-Hill Book Company, Inc., 1956), Chapter 16, and to class notes of Ed. Psy. 576 by R. S. McArthur, Department of Educational Psychology, University of Alberta, Edmonton.

common situation is where the predictors account for variance in the criterion, but not in each other. This illustrated example where predictor variables account for variance in the criterion yields positive beta weights. However, a situation such as that illustrated in Figure 3 could and sometimes does arise. Predictor variable 2 does not remove any variance from the criterion variable but out of predictor 1. Predictor 2 is called the suppressor variable. Its importance lies in the fact that it accounts for or suppresses some of the variance in predictor 1 which is not common to predictor 1 and the criterion, thus making it a

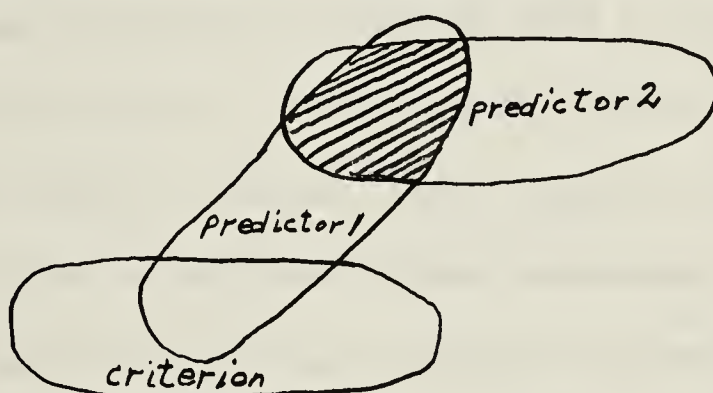


FIGURE 3
CONCEPTUALIZATION OR RELATIONSHIP BETWEEN CRITERION
AND SUPPRESSOR VARIABLES

better predictor of the criterion. Guilford makes the following explanation regarding the suppressor variable: "Its function in a regression equation is to suppress whatever variance in other independent variables may not be represented in the criterion but which may be in some variable that does otherwise correlate with the criterion."¹⁵

Three final points about multiple correlations are: first, R is always positive; second, a suppressor variable always has a negative

¹⁵Ibid., p. 403.

beta weight; and third, the significance of multiple R is tested by an F ratio.

The required value of F is given by the formula¹⁶

$$F = \frac{R^2}{1 - R^2} \frac{N - k - 1}{k}$$

where: R = multiple correlation coefficient
 N = number of observations
 k = number of independent variables or predictors

The table of F is entered with $df_1 = k$ and $df_2 = N - k - 1$.

Friedman Two-Way Analysis of Variance for Ranked Data

The final statistical technique used in analyzing the data was the Friedman two-way analysis of variance for ranked data.¹⁷ It was utilized in determining whether certain climate characteristics were better predictors than others of various student variables. It was possible to use this method since the step-wise regression procedure used to determine multiple R ranked the subtests in order of best predictors of the criterion variable.

For the Friedman tests, the data are cast in a two-way table having N rows and k columns. The rows correspond to individuals, or groups, and the columns to experimental conditions. The test determines whether the rank totals differ significantly. To make this test, the value of

¹⁶Ferguson, op. cit., p. 301.

¹⁷See: B. J. Winer, Statistical Principles in Experimental Design, (Toronto: McGraw-Hill Book Company, Inc., 1962), p. 136; or Sidney Siegel, Nonparametric Statistics, (Toronto: McGraw-Hill Book Company, Inc., 1956), p. 166.

the statistic χ^2_r is computed where

$$\chi^2_r = \frac{12}{Nk(k+1)} \sum_{j=1}^k (R_j)^2 - 3N(k-1)$$

and N = number of rows

k = number of columns

R_j = sum of ranks in j th column

$\sum_{j=1}^k$ = directs one to sum the squares of the sums of ranks over all k conditions.

χ^2_r has an approximate chi square distribution with $k-1$ degrees of freedom.

To summarize, this section included brief accounts of four major statistical techniques utilized to analyze the data. Chi square was used to test whether there were any departures from the null hypothesis of high and low morale distributions along various school and principal characteristics. Pearson r 's were used to establish the degree of relationship between OCDQ subtest scores and various student variables. Multiple R 's were used to determine the degree of correlation between student variables and one or more climate characteristics at a time. The Friedman two-way analysis for ranked data was utilized in determining whether certain climate characteristics were better predictors than others of various student variables.

CHAPTER V

DESCRIPTIVE STATISTICS

I. THE OCDQ RESULTS

As previously outlined, a specified number of teachers from each of the schools in the sample completed Organizational Climate Description Questionnaires. To facilitate statistical computations, the following raw score values were assigned to each item response: nine for "very frequently occurs," eight for "often occurs," seven for "sometimes occurs," and six for "rarely occurs." The raw score data which were punched on IBM cards, one per teacher respondent, were analyzed using a computer program written specifically for this purpose. The mean for each subtest score for each individual was found first; following this, the mean subtest scores in unstandardized form were calculated per school and printed in the output. In terms of the raw scores, high and low means for each subtest over the forty-seven schools were as outlined in Table IX. The differences between high and low means are not as great as might be expected; these range from a high of 1.09 for Production Emphasis to a low of .61 for Intimacy. The other differences are distributed between the two extremes.

Following the calculation of the raw score subtest means per school, the means per subtest were then standardized across forty-seven schools to a mean of fifty and a standard deviation of ten. Another step standardized the raw score means per school across the eight subtests to the same standards as above. Table X shows the distribution of the sub-

TABLE IX
HIGH AND LOW RAW SCORE MEANS AND DIFFERENCES BY OCDQ SUBTESTS
(N = 47)

Subtest	High Mean	Low Mean	Difference
Disengagement	7.07	6.22	.85
Hindrance	7.33	6.46	.87
Esprit	8.36	7.36	1.00
Intimacy	7.59	6.98	.61
Aloofness	7.57	6.78	.79
Production Emphasis	7.73	6.64	1.09
Thrust	8.53	7.47	1.06
Consideration	7.63	6.74	.86

test means standardized across all schools in the sample. These means were later utilized in calculating the correlations with student responses. Table XI gives the medians of each of the subtests; these range from a low of 48.75 for Disengagement to a high of 51.5 for Aloofness. The distribution of medians would indicate that the distributions of scores of Disengagement, Production Emphasis and Consideration are somewhat positively skewed, while those of Aloofness and Thrust are negatively skewed; Esprit, and Intimacy seem to follow normal distribution quite closely.

This research did not deal with climate categorizations as such. However, for additional information, the sample breakdown by type of climate is given in Table XII. The distribution shows that 48 per cent

TABLE X
FREQUENCY DISTRIBUTIONS OF SAMPLE SCHOOL-MEAN
STANDARD OCDQ SUBTEST SCORES

Scores	OCDQ SUBTESTS							
	Dis	Hin	Esp	Int	Alo	Pr Em	Thr	Con
Above 75.5	1					1		
72.5 - 75.5		1				1		1
69.5 - 72.5	1	1	1	1	1			
66.5 - 69.5	3		1	1	1		2	2
63.5 - 66.5	1		4	3	4	1	1	
60.5 - 63.5		7	4	2	1		3	4
57.5 - 60.5	1	2	2	3	3	6	5	4
54.5 - 57.5	6	5	4	4	4	5	4	6
51.5 - 54.5	5	4	4	8	9	5	8	3
48.5 - 51.5	6	8	5	5	6	5	6	5
45.5 - 48.5	9	2	7	5	3	11	3	7
42.5 - 45.5	5	4	3	5	4	5	4	4
39.5 - 42.5	3	5	4	4	3	1	3	2
36.5 - 39.5	2	4	2	1	2	2	5	4
33.5 - 36.5	1	2	5	3	4	2	1	3
30.5 - 33.5	2	1		1	1			2
27.5 - 30.5	1	1	1		1	2	1	
Below 27.5				1			1	

TABLE XI
OCDQ SUBTEST MEDIANS

Subtest	Medians
Disengagement	48.75
Hindrance	50.19
Esprit	50.40
Intimacy	50.10
Aloofness	51.50
Production Emphasis	48.80
Thrust	51.25
Consideration	49.40

TABLE XII
FREQUENCY DISTRIBUTION AND PERCENTAGES OF SCHOOLS BY CLIMATE^a

Climate	Frequency	Per Cent
Open	14	29.8
Autonomous	8	17.0
Controlled	5	10.6
Familiar	5	10.6
Paternal	3	6.4
Closed	12	25.6
Total	47	100.0

^aClimate categorizations are based on a sample of 47 schools.

of the schools in the sample had an Open Climate, 21 per cent had a middle climate, and 32 per cent had a Closed Climate. In comparison, the climate distributions of the 185 schools in the original sample showed that 34 per cent of the schools had an Open Climate, 26 per cent had a middle climate and 38 per cent had a Closed Climate. Notwithstanding, it appears that distributions in climate categorizations in the two samples were not too different from one another.

II. STUDENT RESPONSES

As outlined in Chapter IV, the student questionnaire consists of two parts.¹ The first section is made up of twenty-seven items developed by Coster.² This section was used for two purposes. First, each item was treated as a criterion variable, and second, the total score of twenty-seven items averaged out over N respondents per school yielded a student morale score. Table XIII shows the frequency distribution of forty-seven student morale scores. The highest measure of morale a school could have achieved was 135 and the lowest was twenty-seven. The mean score for all forty-seven schools was 94.96; the median was 95.19. Chi square was calculated to determine whether the morale distribution departed from normality. It was found to be 1.90. With a df of 5, the critical value for chi square at the .05 level equals 11.1. Consequently, there is no statistical basis for rejecting the hypothesis

¹Refer to Appendix B for instrument.

²J. K. Coster, op. cit.

that student morale scores are normally distributed.

TABLE XIII
FREQUENCY DISTRIBUTION OF STUDENT MORALE SCORES^a

Morale Scores	Frequency
105.5 - 108.5	1
102.5 - 105.5	2
99.5 - 102.5	7
96.5 - 99.5	10
93.5 - 96.5	8
90.5 - 93.5	10
87.5 - 90.5	5
84.5 - 87.5	1
81.5 - 84.5	2
78.5 - 81.5	1
Total	47
Mean	94.96
Median	95.19

$$^a \chi^2 = 1.90; .90 > p > .80$$

Item numbers 29, 30, 31, and 32 of the questionnaire were developed by the investigator.³ The scale on which these are based is six for the most favorable response to one for the least favorable response. Item 29 is student rating of school effectiveness, item 30 is student

³Refer to Appendix B for instrument.

rating of teacher likeability, and item 32 is student evaluation of principal effectiveness. Table XIV gives the frequency distribution, means and medians of the sample for items 29 to 32 inclusive. The distributions for each of the items seem to approximate the normal curve. The means and medians for each of items 29, 30, 31 and 32 respectively are as follows: 4.23 and 4.20; 4.23 and 4.21; 4.65 and 4.63; 4.50 and 4.57.

Attendance and drop-out rates were obtained directly from the principals. The per cent attendance ranges from 97.3 to 89.96 with a mean of 93.96. The per cent drop-out ranges from zero per cent to 16.67 per cent with a mean of 4.40 and a median of 3.333.

Considering the information presented in this chapter, that the questionnaires were designed to satisfy the requirements for an interval scale, that sample school means of OCDQ subtest scores and morale scores did not depart radically from normality, it was considered that the use of parametric statistics in the analysis of data was justifiable.

TABLE XIV

DISTRIBUTION OF STUDENT RATED SCHOOL EFFECTIVENESS SCORES, STUDENT
 RATED TEACHER EFFECTIVENESS SCORES, STUDENT RATED TEACHER
 LIKEABILITY SCORES, AND STUDENT RATED PRINCIPAL
 EFFECTIVENESS SCORES

Scores	Student Rated School Effectiveness	Student Rated Teacher Effectiveness	Student Rated Teacher Likeability	Student Rated Principal Effectiveness
5.65 - 6.05				1
5.25 - 5.65			3	3
4.85 - 5.25	2	1	12	11
4.45 - 4.85	8	10	21	14
4.05 - 4.45	27	26	8	8
3.65 - 4.05	4	8	2	6
3.25 - 3.65	5	2	1	2
2.85 - 3.25	1			
2.45 - 2.85				1
Below 2.45				1
Total	47	47	47	47
Mean	4.23	4.23	4.65	4.50
Median	4.20	4.21	4.63	4.57

CHAPTER VI

TESTING THE HYPOTHESES

This chapter is devoted to a comprehensive analysis of data concerning the six hypotheses proposed in this research. With each hypothesis stated, related statistical findings are presented and analyzed. A discussion concerning the findings completes the treatment of each hypothesis.

I. HYPOTHESIS I

Pearson Product-Moment Correlations

Hypothesis I states that subtests of the OCDQ are related to student morale. This section will be confined to the treatment of data concerning the first hypothesis.

Table XIII, page 63, gives the frequency distribution of student morale scores. It was established that the mean morale score of the total sample was 94.96 and the median was 95.19. Further, in testing goodness of fit, a non-significant chi-square at the .05 level led to the conclusion that the distribution of morale scores does not depart significantly from normality.

Table XV presents the correlations of each of the subtests of the OCDQ with student morale.¹

¹For a definition of student morale see above pages 8 and 43.

TABLE XV
CORRELATION OF OCDQ SUBTESTS WITH STUDENT MORALE^a

	OCDQ Subtests							
	Dis	Hin	Esp	Int	Alo	Pr E	Thr	Con
Student Morale	-0.213	0.055	0.260	0.280	-0.154	0.226	0.216	0.075

^aCritical Values are: .10 = .243; .05 = .288; .01 = .372

With a df of 45, critical values at the .05 and .01 levels of significance are .288 and .372. None of the correlations, then, are significant at the .05 level; however, it is well to note that the correlation between Intimacy and morale (0.280) is approaching .288 which would be significant at the .05 level.

Multiple Correlations

When a multiple correlation was calculated between the eight subtests used as predictors and student morale as a criterion, significant multiple R's were found between certain groups of subtests and student morale.

An examination of Table XVI reveals that the subtests which yield significant multiple R's and which make significant contributions toward the prediction of student morale are: first, Intimacy; second, Production Emphasis; and third, Disengagement.

Both Intimacy and Production Emphasis have positive beta weights while Disengagement has a negative beta weight. The three subtests jointly account for 20.53 per cent of the variance. Subtests added beyond the three mentioned above do not add significantly towards the prediction of student morale. The multiple R at this point of cut-off is .453 which is

TABLE XVI

MULTIPLE REGRESSION PREDICTION OF STUDENT
MORALE BY OCDQ SUBTESTS

OCDQ Subtest Scores	Correlation with Student Morale	Beta Weight ($b_0 = 82.124$)	t-Value Significance of Last Added Predictor	% of Variation Accounted for Stepwise	Multiple Correlation R
Intimacy	.280	.1424		7.84	.280
Prod. Emph.	.226	.1496	<u>2.51</u>	4.97	<u>.358^a</u>
Disengage.	-.213	-.1890	<u>4.18^b</u>	7.72	<u>.453</u>
Hindrance	.055	.1328	1.57	2.87	<u>.484</u>
Esprit	.260	.0401	0.21	0.39	<u>.487</u>
Aloofness	-.154	-.0435	0.15	0.29	.491
Consideration	.075	.0423	0.18	0.35	.494
Thrust	.216	-.0180	0.02	0.04	.495
Total				24.47	

^aValues underlined with two lines are significant at the .01 level; with one line, at the .05 level.

^bSubtests added beyond this point do not add significantly to the prediction of student morale.

significant at the .05 level. The hypothesis originally stated is partially supported; the subtests Intimacy, Production Emphasis, and Disengagement acting jointly are significantly related to student morale.

Student Morale Related to School and Administrator Characteristics

In view of the fact that Intimacy, Production Emphasis, and Disengagement taken simultaneously correlated with student morale, it was considered advisable to check out other variables, specifically school and administrator characteristics, to see if any of them were related to student morale. This was done to determine whether there was possible confounding of climate-morale relationships due to principal or school characteristics. The characteristics which were investigated were type of school, size of school, years of experience which the principal had as principal, tenure of principal, age of principal and amount of graduate training a principal had in educational administration.

Data for statistics involved were obtained from two sources. School and principal characteristics were acquired from a Principal's Questionnaire administered at the same time as the OCDQ's were administered. Schools with morale scores above the median were classed as having high morale while those below were classed as low morale schools. Chi square was calculated to determine whether any significant differences existed between the distributions of high and low morale scores.

Tables XVII to XXII inclusive outline the distribution of morale scores for each of the variables mentioned above. Table XVII gives the distribution of low and high student morale scores by type of school. It shows that fifteen out of twenty-two schools in the grades one-twelve type

of school have low morale whereas sixteen out of twenty-four of the schools which are either junior-senior, high or senior high schools show high morale. A chi square of 7.49 with a probability between the .20 and .10 level of significance does not provide grounds for rejecting the hypothesis that there are no significant differences in student morale between the different types of school. The chi square value of 7.49 was calculated on the data as is given in Table XVII. A partial combination of frequencies into a 3 x 2 contingency table yielded a chi square of 6.25 with the probability falling between the .05 and .02 levels whereas, a chi square calculated on a completely collapsed 2 x 2 contingency table yielded a chi square of 6.17, with the probability falling between the .02 and .01 levels of significance. From the discussion presented above it would appear that morale might be related to type of school, with morale being lower in the grades one-twelve type of school than in the schools enrolling only higher grades. At the same time, since there is no assurance that the combination of frequencies along the various categories can be empirically supported it is difficult to state with any degree of assurance that the results are clear-cut. If chi square values are accepted as significant, no additional data is available to the researcher to offer an explanation for the finding; however, the problem is worthy of further investigation.

The distribution of low and high student morale by size of school is given in Table XVIII. Fifteen out of twenty-five schools in the ten-nineteen teachers range have low morale whereas six out of eight schools in the thirty or more teachers range have high morale. The findings seem to point in the direction that there is a direct relationship between

TABLE XVII

DISTRIBUTION OF LOW AND HIGH STUDENT MORALE BY TYPE OF SCHOOL^a

Type of School	Low Morale	High Morale	Total
Grades 1 - 11	1	0	1
Grades 1 - 12	15	7	22
Grades 7 - 12	4	7	11
Grades 9 - 12	2	2	4
Grades 10 - 12	2	7	9
Total	24	23	47

^a χ^2 for data in table as is = 7.49; .20 > p > .10
 χ^2 for data in 3 x 2 table = 6.25; .05 > p > .02
 χ^2 for data in 2 x 2 table = 6.17; .02 > p > .01

TABLE XVIII

DISTRIBUTION OF LOW AND HIGH STUDENT MORALE BY SIZE OF SCHOOL^a

Number of Teachers	Low Morale	High Morale	Total
1 - 9	1	1	2
10 - 19	15	10	25
20 - 29	6	6	12
30 or more	2	6	8
Total	24	23	47

^a χ^2 for data in table as is = 2.65; .50 > p > .30
 χ^2 for data in 2 x 2 table = 1.71; .20 > p > .10

high morale and the larger schools. However, chi squares of 2.65 (probability between .50 and .30) calculated on the data in the table as is, and 1.71 (probability between .20 and .10) calculated on a 2 x 2 contingency table provide no basis for rejecting the hypothesis that there are no significant differences in student morale among the different sizes of schools.

It is seen from Table XIX that more high morale schools are found under the administration of principals with nine or fewer years of experience than in schools where the principals had more experience than that. Chi squares however indicate that the differences are not significant.

Examinations of Tables XX, XXI, and XXII showing distributions of low and high student morale by tenure of principal, age of principal, and amount of graduate training in educational administration respectively reveal that the distributions are quite evenly divided. Chi squares with high probabilities substantiate this observation.

In sum, it appears that there might be factors other than those measured by the eight subtests which determine student morale. Findings resulting from this research indicate that the type of school might have some influence on student morale. However, lack of appropriate data concerning the different types of schools prevents further investigation of the problem.

TABLE XIX

DISTRIBUTION OF LOW AND HIGH STUDENT MORALE BY YEARS
OF EXPERIENCE OF PRINCIPAL AS PRINCIPAL^a

Years of Experience as Principal	Low Morale	High Morale	Total
1 - 3 yrs.	7	6	13
4 - 9 yrs.	6	11	17
10 - 15 yrs.	4	3	7
16 or more	7	3	10
Total	24	23	47

^a χ^2 for data in table as is = 3.27; .50 > p > .30
 χ^2 for data in 3 x 2 table = 3.32; .20 > p > .10

TABLE XX

DISTRIBUTION OF LOW AND HIGH STUDENT MORALE BY TENURE OF PRINCIPAL^a

Tenure of Principal	Low Morale	High Morale	Total
1 - 4 yrs.	15	12	27
5 - 8 yrs.	5	6	11
9 - 15 yrs.	1	3	4
16 or more	3	2	5
Total	24	23	47

^a χ^2 for data in table as is = 1.60; .70 > p > .50
 χ^2 for data in 3 x 2 table = 0.52 .80 > p > .70

TABLE XXI

DISTRIBUTION OF LOW AND HIGH STUDENT MORALE BY AGE OF PRINCIPAL^a

Age of Principal	Low Morale	High Morale	Total
29 yrs. and under	1	1	2
30 - 39 years	9	10	19
40 - 49 years	7	7	14
50 yrs. or more	7	5	12
Total	24	23	47

^a χ^2 for data in table as is = 1.07; $.80 > p > .70$
 χ^2 for data in 3 x 2 table = 0.18; $.70 > p > .50$

TABLE XXII

DISTRIBUTION OF LOW AND HIGH STUDENT MORALE BY AMOUNT OF GRADUATE TRAINING IN EDUCATIONAL ADMINISTRATION^a

Amount of Graduate Training	Low Morale	High Morale	Total
No graduate courses in administration	12	11	23
Some courses in administration	12	10	22
Hold a degree in educational administration	0	2	2
Total	24	23	47

^a χ^2 for data in table as is = 2.21; $.70 > p > .50$
 χ^2 for data in 2 x 2 table = .02; $.90 > p > .80$

Discussion

Using Pearson r 's, no significant relationships were found between the eight subtests of the OCDQ and student morale. However, a close examination of the larger correlations revealed that Intimacy correlates .280 and Esprit .260 with student morale. These are just below the level required for significance at the .05 level.

Intimacy, Production Emphasis, and Disengagement together are significantly correlated with student morale. In the step-wise regression, it is brought out quite clearly that Intimacy is the best predictor; this is followed closely by Production Emphasis. It would seem that there is a discrepancy between Pearson r 's, which show Intimacy and Esprit correlated most highly with student morale, and the step-wise regression which shows Intimacy, Production Emphasis and Disengagement as the best predictors and yielding a significant multiple R . However, the contradiction is explained away when it is remembered that the step-wise regression procedure chooses as predictors those which correlate highly with the criterion but not too strongly with each other. Intimacy and Esprit, which correlate more highly with each other than do Intimacy and Production Emphasis, and correlatively measure the same thing to a certain degree, will obviously not be taken as the two best separate predictors. * For this reason the three best predictors are Intimacy, Production Emphasis and Disengagement.

The finding that Intimacy is the best predictor of student morale

*Refer to Appendix E for a table of intercorrelations between OCDQ subtest scores.

would appear surprising and somewhat perplexing. The definition which Halpin and Croft ascribe to the term Intimacy would not have led to predicting this relationship.² In attempting an explanation of the association, it was found useful to examine the items which constitute the subtest. These items are:

1. Teachers' closest friends are other faculty members at this school.
2. Teachers invite other faculty members to visit them at home.
3. Teachers know the family background of other faculty members.
4. Teachers talk about their personal life to other faculty members.
5. Teachers have fun socializing together during school time.
6. Teachers work together preparing administrative reports.
- 7. Teachers prepare administrative reports themselves.³

An examination of these items reveals that a group of teachers who possess these characteristics visit each other in their homes, exchange confidences and personal information and at the same time are a closely knit group. The fact that the group is closely knit makes one wonder whether it possesses qualities which are beneficial to the school and students or whether it is a strictly informal social group.

The answer to this question is suggested by noting that Disengagement, the third best significant predictor of student morale, is

² Andrew W. Halpin and Don B. Croft, The Organizational Climate of Schools (The University of Chicago: Midwest Administration Center, 1963), p. 6.

³ Ibid., p. 30.

negatively correlated with Intimacy. Some items constituting Disengagement are:

1. Teachers ramble when they talk in faculty meetings.
2. Teachers interrupt other faculty members who are talking in staff meetings.
3. Teachers ask nonsensical questions in faculty meetings.
4. Teachers socialize together in small select groups.
5. The mannerisms of teachers in this school are annoying.
6. There is a minority group of teachers who always oppose the majority.⁴

Thus, characteristics of staffs high in Disengagement are that teachers are cliquish, act in a non-directed and distracting manner, are destructive of each other, and vie against each other either as individuals or in small groups. Further, there is probably a great deal of friction and jealousy amongst groups and teachers--probably a very unhappy situation all around.

Having dealt with Intimacy and Disengagement, the two groups characteristics, and returning to Table XVI, it is noted that the second best and significant predictor of student morale is Production Emphasis--a leader characteristic. Items which exemplify the subtest are:

1. The principal checks the subject matter ability of teachers.
2. The principal corrects teachers' mistakes.

⁴Ibid., p. 30.

3. The principal makes all class scheduling decisions.
4. The principal schedules the work for the teachers.
5. The principal insures that teachers work to their full capacity.⁵

It appears that a principal high in Production Emphasis knows the qualifications and abilities of his teachers, assists them in their teaching and corrects errors, and runs a well organized school. In short, he probably knows where he is going and what he is doing.

Combining the three principal-teacher characteristics it is seen that teachers possessing these qualities work together as a group, are friendly to the point of knowing each other's problems intimately, visit and respect each other. As a contrast, they are not cliquish, envious, and destructive of one another. They seem to be characterized by a wholesome liking and mutual respect for their associates. In addition to these group characteristics, the principal provides solid leadership. He knows his work, his teachers, and runs a well organized school.

With group and leader characteristics such as these, it is no longer difficult to conceive why high student morale would be associated with high Intimacy and Production Emphasis, and low Disengagement. It would seem that characteristics such as this would almost naturally "rub off" on the students and that morale would thrive in a climate of this nature.

In summary, three subtests contribute to yield a significant multiple R with student morale. These are positively weighted Intimacy

⁵Ibid., p. 31.

and Production Emphasis, and negatively weighted Disengagement. The significance of Intimacy as originally defined is hard to conceive; however some clues are offered by an examination of specific items. The importance of it lies in the finding that it shows more than just friendly social relations among staff members. This is brought out by the fact that in most cases where Intimacy is a significant predictor, a negative beta weight and/or a negative r for or with Disengagement are also found. That is, members of a group high in Intimacy enjoy genuinely friendly relations with one another, know each other well, and work well together as a group. Also, they do not bicker, are not envious of each other, or factional. This coupled with high Production Emphasis is related to high student morale.

It would seem that Halpin and Croft may have erred somewhat in defining Intimacy. It does refer "to the teachers' enjoyment of friendly social relations with each other."⁶ But it moreover refers to a dynamic social group in which members of the group work well and in harmony. They are not cliquish or envious; they do not act as harmful, corrosive agents on each others' personality.

II. HYPOTHESIS II

The second hypothesis states that subtests of the OCDQ are related to student attitudes towards the teachers, towards the school, towards the school program, towards the appropriateness of school work, towards future expectations, and towards social acceptance. This

⁶Ibid., p. 29.

section will deal with statistical treatments used in testing the second hypothesis. The descriptive categorizations listed in this section are essentially centered around the twenty-seven items in the morale scale. The items are distributed according to the categorizations in the following manner:

<u>Descriptive Categorizations</u>	<u>Item Numbers</u>
Attitudes related towards teachers	3, 11, 14, 16, 17, 18, 26
Attitudes related towards the school	6, 8, 19, 20, 21, 27
Attitudes related towards the school program	10, 12
Attitudes related towards the appropriateness of school work	5, 13
Attitudes related to future expectations	2, 4, 23
Attitudes related to social acceptance	7, 22, 25, 28
Miscellaneous attitudes	9, 15, 24

Pearson Product-Moment Correlations

Not all the items listed above showed significant correlations with the OCDQ subtests. Those that did are included in Table XXIII. It is well to note that only nine items had any significant correlations with different OCDQ subtest scores. It is also interesting that Production Emphasis, Thrust and Intimacy are the only subtests which are correlated significantly with the three items in the descriptive category dealing with attitudes towards teachers. Esprit, Intimacy, Aloofness and Thrust are the only subtests significantly correlated with items dealing with attitudes towards the school. Only Esprit, Intimacy and

TABLE XXIII

CORRELATIONS BETWEEN OCDQ SUBTEST SCORES AND ITEMS IN VARIOUS
DESCRIPTIVE ATTITUDINAL CATEGORIZATIONS^a

Descriptive Categorization and Items in Each Category	OCDQ Subtests							
	Dis	Hin	Esp	Int	Aloof	Pr	Em	Thr
<u>Attitudes Towards the Teachers</u>								
11. Student opinion of the teachers in their high school							.31 ^b	
18. Student Confidence in teachers regarding obtaining advice on personal problems				.30			.29	
26. Student opinion of teachers' knowledge of subject matter								.32
<u>Attitudes Towards the School</u>								
20. Student opinion of the organization of their school				.43		-.32		.32
27. Student opinion of the adequacy of school equipment and supplies				.44				
<u>Attitudes Towards the School Program</u>								
10. Student opinion of the number of activities in their school				.32	.31	-.38		
12. Student opinion of the subjects offered in their school				.35				
<u>Attitudes Related to Social Acceptance</u>								
25. Student opinion of other boys and girls in the high school				.46				
<u>Attitudes Related Towards Community Interest in the School</u>								
15. Student opinion of the feeling of the community towards the high school				.42				

^aOnly significant correlations are shown.

^bCritical values are: .05=.288; .01=.372

Aloofness are significantly correlated with attitudes related towards the school program. Esprit comes out strongly in its correlation with student opinion of other boys and girls in the high school while Intimacy comes out strongly in its relation to student opinion of the feeling of the community towards the high school.

In analyzing the significant correlations between the OCDQ subtests and the nine attitudinal items listed in Table XXIII, the subtests most frequently drawn upon are the following five: Esprit, Intimacy, Aloofness, Production Emphasis and Thrust. At no time are the three, Disengagement, Hindrance and Consideration, significantly correlated with any of the items.

Multiple Correlation

A step-wise regression run on the same items (2 - 28 inclusive) ranked the subtests in order of their efficacy in predicting each of the items. Table XXIV shows subtests as they were ranked by this method. Two conditions determined which items and subtests were included in the table. First, a significant multiple R had to be found and second, the subtest had to be adding significantly to the prediction of the criterion variable. As a consequence, it will be found that Table XXIV does not include all the items in the morale scale; neither does it have rank listings under some of the subtests.

The aim of the investigator in ranking and grouping significant subtests according to descriptive attitudinal categories was to determine if some characteristic patterning would be evident. However, this does not appear to be the case. It is evident though that different

TABLE XXIV

MULTIPLE REGRESSION RANKING OF OCDQ SUBTEST SCORES BY ITEMS IN
VARIOUS DESCRIPTIVE ATTITUDINAL CATEGORIZATIONS

Descriptive Categorization and Items in Each Category	OCDQ Subtests							
	Dis	Hin	Esp	Int	Aloof	Pr	Em	Thr
<u>Attitudes Towards the Teachers</u>								
11			2				1	
18			1		-3 ^a		2	
26								1
<u>Attitudes Towards the School</u>								
6	-2			1			3	
20		2	1		-3			
21		2	3					1
27		2		1				
<u>Attitudes Towards the School Program</u>								
10		3	4	2	-1			
12	-2		-4	1			3	
<u>Attitudes Related Towards The Ap- propriateness of School Work</u>								
5	-1		3	4	5	-2		
<u>Attitudes Related to Social Accept- ance</u>								
25		2	1					
<u>Attitudes Related Towards Parent Interest in School Work</u>								
9	3			2			-4	1
<u>Attitudes Related Towards Community Interest in the School</u>								
15	-3	2		1				
<u>Attitudes Related Towards School Work</u>								
24					1	2		3

^aA negative sign preceeding a rank number indicated that the subtest has a negative beta weight

subtests are related to some attitudinal items. Hence it could be stated that hypothesis II is partially supported by the findings in this section.

Discussion

As stated above, no definite pattern seemed to be established in the rankings of subtests in the various descriptive categorizations when a step-wise regression procedure was used to predict attitudes in terms of OCDQ subtests. This is apparently because of the fact that where two subtests are correlated to some extent, another subtest showing less correlation with the first subtests will be chosen as the next best predictor. Consequently, it seems that for purposes of this sort another statistical technique, a factorial analysis of the correlation should be applied to the data. This would identify patterns of commonly emerging factors.

Nevertheless, it would seem that a certain trend is discernible in the correlations for various attitudinal variables given in Table XXIII. It is evident that at no time did the subtests Disengagement, Hindrance, and Consideration show any significant correlations with any of the attitudinal items. Also, reference to the definition of, and an analysis of the items constituting Aloofness made it more evident why the subtest is negatively correlated ($-.32$) with student opinion of their school and the opinion of the number of activities in their school ($-.138$). Some items constituting Aloofness are:

1. Teachers eat lunch by themselves in their own classrooms.
2. Faculty meetings are mainly principal-report meetings.
3. The principal runs the faculty meeting like a business conference.

—4. School secretarial service is available for teachers' use.

5. Faculty meetings are organized according to a tight agenda.

6. The rules set by the principal are never questioned.⁷

The definitions provided for this subtest states that it refers to behavior by the principal which is characterized as "formal and impersonal." He "goes by the books" and prefers to be guided by "rules and policies."⁸ An examination of the results and subtests prompts the investigators to state that a principal possessed of these characteristics is not only formal and business-like, but that he may be coldly formal and business-like to the point of scornfulness and haughtiness. Furthermore, he probably discourages friendly relations not only between himself and the teachers but also among the teachers as a group. Consequently, a principal's lack of warmth and friendly interest in teachers' and students' affairs and welfare may lead to the negative correlations between Aloofness and student opinion of the organization of their school and student opinion of the number of activities in their school.

The next significant point that was brought out in the examination of the correlations in Table XXIII was that correlations of attitudinal items seemed to alternate between Esprit and Intimacy, the two positive group characteristics, and between Production Emphasis and

⁷Ibid., p. 31.

⁸Ibid., p. 32.

Thrust, the two positive leader characteristics.⁹ It would appear that what was obtained here was a certain dimensionality in measurement of both group and leader behavior; yet at the same time both dimensions, for example Intimacy and Esprit, seem to be measures of one larger and broader factor. Two reasons are proposed for the latter conclusion. Firstly, correlations between Intimacy and Esprit (.207) and Production Emphasis and Thrust (.101) are positive. An examination of Tables XXV and XXVI revealed the second possible reason. As made evident from Table XXV, items constituting Esprit load highly on factor VII; items constituting Intimacy load highly on Factor III. However, it will be noted that Esprit items seventeen, eighteen, nineteen, twenty-one, twenty-three and twenty-six also show some loading on Factor III, the Intimacy factor. Thus, it can be said that some Esprit items overlap with some of the items which measure Intimacy. Note however that the opposite relationship does not obtain to the same extent.

Similarly, an examination of Table XXVI illustrates that Production Emphasis items load highly on factor IV and Thrust items load highly on factor I. However, it will be noted that Production Emphasis items 45, 46, 47, 48 and 49, also show some loading on factor I. Thus it may be stated that these items not only measure Production Emphasis but also something similar to Thrust items to a certain extent. Again, the opposite relationship does not hold true to the same extent.

⁹ Halpin and Croft do not consider that the subtest Production Emphasis is a measure of a beneficial principal characteristic. However, findings of the investigator led him to conclude that it may be otherwise. A detailed discussion of this is given under Hypothesis III.

TABLE XXV
 ROTATED ITEM FACTOR MATRIX FOR ITEMS OF ESPRIT
 AND INTIMACY OF THE OCDQ^a
 (N = 1151)

OCDQ Subtest Items	Factors		
	III	VII	
Esprit	17.	19	-41
	18.	18	-45
	19.	21	-43
	20.	04	-35
	21.	21	-38
	22.	-02	-05
	23.	55	-18
	24.	12	-31
	25.	02	-41
	26.	20	-28
Intimacy	27.	53	09
	28.	62	07
	29.	52	-10
	30.	59	-09
	31.	50	-10
	32.	22	-07
	-33.	-15	-26

^aTables XXV and XXVI are adapted from Table I, Rotated Item Factor Matrix for 64 Items of the OCDQ, Form IV, from: A. W. Halpin and Don B. Croft, Manual for the Leader Behavior Description Questionnaire (Columbus, Ohio: Bureau of Business Research, The Ohio State University, 1957), pp. 34-35.

TABLE XXVI

ROTATED ITEM FACTOR MATRIX FOR ITEMS OF PRODUCTION
EMPHASIS AND THRUST OF THE OCDQ
(N = 1151)

OCDQ Subtest Items	Factors		
	I	IV	
Production Emphasis	43.	-03	58
	44.	-06	54
	45.	20	47
	46.	12	54
	47.	21	37
	48.	11	23
	49.	-20	21
Thrust	50.	74	-06
	51.	70	10
	52.	72	-04
	53.	60	07
	54.	64	05
	55.	49	00
	56.	41	19
	57.	51	07
	58.	63	-17

The discussion presented above led the investigator to the following conclusions. First, since both Esprit and Intimacy seem to measure desirable behavioral aspects and yet since they seem to differ in the things they correlate with, it was felt that they are different dimensions of desirable group characteristics. The same may be true for Thrust and Production Emphasis. However, since there appears to be a certain degree of overlap between the dimensions in terms of correlations and factor loadings, it seems that Esprit and Intimacy, and Production Emphasis and Thrust might be, to a limited extent, dimensional measure of two larger global factors.

Having reached this stage of the analysis, and referring back to Table XXIII, the investigator still had difficulty in explaining why Esprit correlated with certain items in one case while Intimacy correlated with others; the same applied to Production Emphasis and Thrust. Although the relationships show well the dimensionality of the subtests, it would appear that greater refinement in items and subtests is desirable and necessary before a better understanding of the correlations would be possible.

III. HYPOTHESIS III

Hypothesis III states that subtests of the OCDQ are related to student rated school effectiveness, student rated teacher effectiveness, and student rated teacher likeability. This section will be confined to the analysis of data related to the stated hypothesis.

Pearson Product-Moment Correlations

Correlations between subtest scores and student rated school effectiveness, student rated teacher effectiveness, and student rated teacher likeability are found in Table XXVII. Production Emphasis correlates .38 and Thrust .29 with student rated school effectiveness. Also, Production Emphasis correlates .31 with student rated teacher effectiveness. And again, Production Emphasis correlates .30 with student rated teacher likeability. The correlation between Production Emphasis and student rated school effectiveness is significant at the .01 level; the others are significant at the .05 level.

Multiple Correlation

Tables XXVIII, XXIX and XXX show the multiple regression prediction and correlations of the OCDQ subtests with each of student rated school effectiveness, teacher effectiveness, and teacher likeability. Table XXVIII illustrates that Production Emphasis and negatively weighted Disengagement are the best predictors of student rated school effectiveness.

Table XXIX illustrates that again Production Emphasis and Disengagement are the two best predictors of student rated teacher effectiveness.

Finally, Table XXX shows that the only subtest which makes any significant contribution towards the prediction of student rated teacher likeability is Production Emphasis. No other subtests seem to enter the picture appreciably.

Since Production Emphasis, Thrust, Disengagement are correlated

with the criterion variables, it can be concluded that hypothesis III is partially supported by the findings in this section.

TABLE XXVII

CORRELATIONS BETWEEN OCDQ SUBTEST SCORES AND STUDENT RATED SCHOOL EFFECTIVENESS, STUDENT RATED TEACHER EFFECTIVENESS, AND STUDENT RATED TEACHER LIKEABILITY
(N = 47)

Items	OCDQ Subtests							
	Dis	Hin	Esp	Int	Aloof	Pr Em	Thr	Con
Student Rated School Effectiveness	-.20	.03	.19	.10	-.10	<u>.38^a</u>	<u>.29^b</u>	.03
Student Rated Teacher Effectiveness	-.13	-.07	.04	.05	.07	<u>.31</u>	.18	.06
Student Rated Teacher Likeability	-.04	-.06	.17	.00	.09	<u>.30</u>	.19	.04

^aCorrelations underlined with two lines are significant at the .01 level; correlations underlined with one line are significant at the .05 level.

^bCritical values are: .05 level = .288; .01 level = .372

Discussion

To summarize, Production Emphasis correlated significantly with each of student rated school effectiveness, student rated teacher effectiveness, and student rated teacher likeability; Thrust correlated significantly with student rated school effectiveness. However, since Thrust and Production Emphasis are correlated with each other to a certain degree, the multiple regression prediction technique showed that Production Emphasis and Disengagement were the two best predictors of the first two criterion variables, and Production Emphasis by itself

TABLE XXVIII

MULTIPLE REGRESSION PREDICTION OF STUDENT RATED SCHOOL
EFFECTIVENESS BY OCDQ SUBTESTS

OCDQ Subtest Scores	Correlation with Student Rated School Effectiveness	Beta Weight ($b_0=3.7176$)	t-Value Significance of Last Added Predictor	% of Variation Accounted for Stepwise	Multiple Correlation R
Prod. Emphasis	<u>.38^a</u>	.0164		14.33	<u>.379</u>
Disengagement	-.20	-.0144	<u>6.64^b</u>	11.24	<u>.506</u>
Hindrance	.03	.0039	0.51	0.87	<u>.514</u>
Thrust	<u>.29</u>	.0065	0.53	0.91	<u>.523</u>
Esprit	.19	-.0042	0.28	0.49	<u>.527</u>
Intimacy	.10	.0030	0.36	0.64	<u>.534</u>
Consideration	.03	-.0022	0.11	0.19	.535
Alloofness	-.10	.0013	0.05	0.09	.536
Total				28.76	

^a Values underlined with two lines are significant at the .01 level; with one line, at the .05 level.

^b Subtests added beyond this point do not add significantly to the prediction of student rated school effectiveness.

TABLE XXIX

MULTIPLE REGRESSION PREDICTION OF STUDENT RATED TEACHER
EFFECTIVENESS BY OCDQ SUBTESTS

OCDQ Subtest Scores	Correlation with Student Rated Teacher Effectiveness	Beta Weight ($b_0=4.235$)	t-Value Significance of Last Added Predictor	% of Variation Accounted for Stepwise	Multiple Correlation R
Prod. Emphasis	<u>.31</u> ^a	.0146		9.56	<u>.3091</u>
Disengagement	-.13	-.0127	<u>2.84</u> ^b	5.48	<u>.388</u>
Aloofness	.07	.0065	1.44	2.76	<u>.422</u>
Esprit	.04	-.0091	1.05	2.00	<u>.445</u>
Hindrance	-.07	-.0049	0.88	1.68	.463
Thrust	.18	.0033	0.33	0.65	.470
Intimacy	.05	.0025	0.28	0.55	.476
Consideration	.06	-.0001	0.00	0.00	.476
Total				22.67	

^aValues underlined with two lines are significant at the .01 level; with one line, at the .05 level.

^bSubtests added beyond this point do not add significantly to the prediction of student rated teacher effectiveness.

TABLE XXX

MULTIPLE REGRESSION PREDICTION OF STUDENT RATED TEACHER
LIKEABILITY BY OCDQ SUBTESTS

OCDQ Subtest Scores	Correlation with Student Rated Teacher Likeability	Beta Weight ($b_0 = 3.945$)	t-Value Significance of Last Added Predictor	% of Variation Account for Stepwise	Multiple Correlation R
Prod. Emphasis	<u>.30^a</u>	.0116	^b	8.68	<u>.295</u>
Esprit	.17	.0037	1.38	2.77	.338
Thrust	.19	.0045	0.35	0.71	.345
Hindrance	-.06	-.0029	0.19	0.40	.354
Intimacy	.00	-.0017	0.08	0.16	.357
Consideration	.04	-.0016	0.06	0.12	.358
Disengagement	-.04	.0009	0.01	0.02	.359
Alloofness	.09	-.0004	0.00	0.01	.359
Total				12.86	

^aValues underlined with two lines are significant at the .01 level; with one line, at the .05 level.

^bSubtests added beyond this point do not add significantly to the prediction of student rated teacher likeability.

was the best predictor of the third criterion variable. It becomes apparent at this time that a closer analytical examination of Production Emphasis would be desirable.

Halpin and Croft defined Production Emphasis as follows:

Production Emphasis refers to behavior by the principal which is characterized by close supervision of the staff. He is highly directive, and plays the role of "straw boss." His communications tend to go in only one direction, and he is not sensitive to feedback from the staff.¹⁰

The seven items which measure Production Emphasis are as follows:

1. The principal makes all class scheduling decisions.
2. The principal schedules the work for the teachers.
3. The principal checks the subject matter ability of teachers.
4. The principal corrects teachers' mistakes.
5. The principal insures that teachers work to their full capacity.
6. Extra duty for teachers is posted conspicuously.
7. The principal talks a great deal.¹¹

The definition of Production Emphasis, by the use of such terms or phrases as "straw boss", "communication is only in one direction," and "not sensitive to feedback" tends to paint a demeaning picture of a principal possessing these qualities.¹² However, a perusal of the seven items constituting Production Emphasis does not necessarily con-

¹⁰Halpin and Croft, op. cit., p. 32.

¹¹Ibid., p. 31.

¹²Ibid., p. 32.

vince a person that the characteristics described are undesirable. On the contrary, these items bear some similarity to the Initiating Structure items in the Leader Behavior Description Questionnaire.¹³ Some examples of these items from the LBDQ are:

- (1) He makes his attitudes clear to the group.
- (2) He rules with an iron hand.
- (3) He criticizes poor work.
- (4) He assigns group members to a particular task.
- (5) He maintains definite standards of performance.
- (6) He encourages the use of uniform procedures.
- (7) He sees to it that group members are working up to capacity.¹⁴

Keeler¹⁵ found that Initiating Structure correlated .420 (significant at the .01 level) with the productivity of the schools as measured by grade nine departmental examinations. McBeath¹⁶ found that the correlation between student rated teacher effectiveness and Initiating Structure was

¹³A. W. Halpin, Manual for the Leader Behavior Description Questionnaire, (Columbus: Bureau of Business Research, the Ohio State University, 1957).

¹⁴Ibid.

¹⁵B. T. Keeler and J. H. M. Andrews, "Leader Behavior of Principals, Staff Morale and Productivity," The Alberta Journal of Educational Research, IX, (September, 1963), pp. 183 and 188.

¹⁶Arthur G. McBeath, "Teacher Leader Behavior and its Relation to Teacher Effectiveness," (unpublished Master's thesis, the University of Alberta, Edmonton, 1959), p. 98.

.57 (significant at the .01 level).

It might be concluded that Halpin and Croft emphasized only negative aspects in generalizing about the subtest Production Emphasis and that some rethinking might be in order concerning its definition. It could possibly be descriptive of some qualities which portray an efficient, goal directed and knowledgeable administrator and hence be considered as desirable characteristics. Such conclusions tend to be supported by the findings related to hypotheses I, II, and III. In testing hypothesis I it was observed that, following Intimacy, Production Emphasis was the next best predictor of student morale. In testing hypothesis II it was observed again that Production Emphasis correlated positively and significantly with student opinion of the teachers in their high school and student confidence in teachers regarding obtaining advice on personal problems. Added to this are the findings for hypothesis III. Consequently the conclusion would seem to be that leader characteristics as measured by the subtest Production Emphasis are not necessarily undesirable characteristics, nor are the terms of "straw boss," "communication in one direction only" necessarily justifiable. Contrariwise, it would seem that in terms of student morale and attitudes, an evident amount of Production Emphasis is a desirable leader characteristic. It would appear that a principal high in Production Emphasis knows the qualifications and abilities of his teachers, assists them in their teaching, corrects their errors, and runs a well organized school. In short, he knows where he is going and what he is doing.

In addition to the fact that Production Emphasis was the best

predictor of all three criterion variables, it was found that Disengagement was the next best predictor of student rated school effectiveness and student rated teacher effectiveness. Referring back to hypothesis I where a rather detailed analysis of Disengagement was presented, it was proposed that some characteristics of staffs high in Disengagement might be that teachers are cliquish, act in a non-directed and distracting manner, and vie against each other as individuals or in small groups. Further, there is probably a great deal of friction and jealousy amongst teachers and groups--probably an unhappy situation all around. Thus, it is not too difficult to conceive why Disengagement would correlate negatively with the three criterion variables or why negatively weighted Disengagement would be a good predictor of the criterion variables. In short, students will not rate a school or teachers as highly effective if the staff is characterized by a high degree of Disengagement.

Reference to Table XXVII reveals that Thrust, a principal characteristic, shows some positive correlation with the three criterion variables, significantly with student rated school effectiveness (.29) and not significantly but in the same direction with student rated teacher effectiveness (.18) and student rated teacher likeability (.19). The highest correlations are then found with the two positive leader characteristics--Production Emphasis first and Thrust second. It is seen that group characteristics, either Disengagement or Esprit, are next best correlated although not significantly with each of the variables. Disengagement and Esprit are correlated -.20 and .19 respectively with student rated school effectiveness, Disengagement with student rated

teacher effectiveness ($-.13$) and Esprit with student rated teacher likeability ($.17$).

Multiple regression prediction equations show that Production Emphasis, a principal characteristic, followed by a negative staff characteristic, Disengagement, are the two best predictors of student rated school effectiveness and student rated teacher effectiveness; Production Emphasis, a positive principal characteristic, followed by Esprit, a positive staff characteristic, are the two best predictors of student rated teacher likeability.

At this point the question still remains as to why student rated school effectiveness, teacher effectiveness and teacher likeability are correlated most highly with, and are best predicted by, a principal characteristic rather than a group characteristic. A possible reply to this query may be in the theory developed for this project. It was hypothesized that school climate and student attitudes would be influenced by principal-teacher interactions. This theory seems to be supported by the findings related to this hypothesis. It would appear that two conclusions derive from these findings: first, students evaluate the school and teachers in terms of Production Emphasis, a principal characteristic--possibly causative of well organized instruction in a smoothly operating school; and second, students evaluate the school and teachers in terms of the Esprit of a group and the absence of cliquishness, bickering and dissension amongst the teachers.

The above findings seem to substantiate the findings of Keeler who studied interrelationships between leader behavior of principals,

staff morale and productivity. He concluded that:

. . . leader behavior of the principal of a school, as perceived by his staff, measured by the Leader Behavior Description Questionnaire, is significantly related to the productivity of the schools as measured by grade nine departmental examinations

There is some evidence to indicate that the relationship of the Initiating Structure dimension is greater than that of the Consideration Dimension

Also

. . . the morale of the staff of a school as measured by the Keeler Scale for the Cohesiveness and Induction of Teaching staffs, is related to productivity of the school.¹⁷

The two studies seem to agree in that a leader characteristic is of primary importance and a group characteristic of secondary importance in determining student productivity and student attitudes.

Two possible explanations may shed light on this relationship. It will be recalled that the model presented to explain the principal-teacher-student relationships proposed two lines of influence; the first being a principal-teacher-student continuum of influence, and the second being a direct principal-student line of influence. It appears that both of these lines of influence are brought to bear in the predictions of criterion variables in this situation. However, reviewing the items constituting the subtest Production Emphasis it seems that the actions characterizing a principal high in Production Emphasis may be descriptive of a principal who is extensively goal oriented, who attempts to achieve ends through good organization and influencing teachers directly. It seems that this type of behavior might not be direct-

¹⁷ Keeler and Andrews, op. cit., pp. 188-189.

ly evident to the students, but only in terms of the results of the organization of the school, of teacher behavior, and of teacher effectiveness as teachers. For this reason it is proposed that students probably rate the effectiveness of their school and teachers, and the likeability of their teachers in terms of Production Emphasis which acts in the continuum of principal-teachers-students, and secondly, in terms of the direct principal-student relationship as shown by the relatively high correlations with Thrust.

Combined with the next best predictors, Disengagement and Esprit, it might be concluded that findings centered around this hypothesis illustrate that students rate the school, teachers and teacher likeability in terms of: first, leader measures, Production Emphasis and Thrust which are characterized by good organization, good leadership and goal orientation, and good example; and second, in terms of Disengagement and Esprit, characterizing a staff which is friendly, gets along together, is not cliquish, and is not disorganized or disoriented in its activities. Consequently, these findings support the possibility that teacher-pupil relationships do not solely influence student attitudes; the principal appears to be an important factor in the total organizational structure of the school.

IV. HYPOTHESIS IV

Hypothesis IV states that subtests of the OCDQ are related to student rated principal effectiveness.

Correlations and Multiple Correlations

An examination of Table XXXI reveals that Thrust, Aloofness and Esprit are the three subtests correlated with student rated principal effectiveness. The correlation coefficients are .33, $-.30$, and .31 respectively; all three are significant at the .05 level.

The stepwise regression shows that Thrust and Aloofness are the two best predictors of the criterion. The maximum significant multiple R is .412 when the three predictors, Thrust, Aloofness, and Production Emphasis, are taken into account.

Hence, it can be stated that the hypothesis is partially supported by the findings.

Discussion

A somewhat different pattern of correlations is evident here than was found in student rated school effectiveness, teacher effectiveness, and teacher likeability. Whereas Production Emphasis was significantly correlated with the three previous criterion variables, Thrust, Aloofness and Esprit are correlated with student rated principal effectiveness. In its prediction by means of multiple regression the two best predictors are Thrust and negatively weighted Aloofness. Esprit, which is correlated with the criterion is shunted into fourth place because it itself is correlated highly (.57) with Thrust.

The pattern of correlations found in testing this hypothesis is rendered more understandable when reference is made to Figure I, page 22. One dimension of the model illustrates that student attitudes and output may be determined directly by principal-student interaction, bypassing

TABLE XXXI

MULTIPLE REGRESSION PREDICTION OF STUDENT RATED PRINCIPAL
EFFECTIVENESS BY OCDQ SUBTESTS

OCDQ Subtest Scores	Correlation with Student Rated Principal Effectiveness	Beta Weight ($b_0=3.1048$)	t-Value Significance of Last Added Predictor	% of Variation Accounted for Stepwise	Multiple Correlation R
Thrust	<u>.33^a</u>	.0130		10.55	<u>.325</u>
Alloofness	<u>-.30</u>	-.0142	<u>2.02^b</u>	3.93	<u>.381</u>
Prod. Emphasis	.17	.0101	1.30	2.51	<u>.412</u>
Esprit	<u>.31</u>	.0089	0.65	1.26	.427
Hindrance	-.03	.0137	1.15	2.22	.453
Intimacy	.17	.0072	0.42	0.82	.462
Disengagement	-.23	-.0084	0.35	0.70	.469
Consideration	.05	-.0027	0.05	0.10	.469
Total				22.10	

^aValues underlined with two lines are significant at the .01 level; with one line, at the .05 level.

^bSubtests added beyond this point do not add significantly to the prediction of student rated teacher likeability.

teacher-student interaction. One would expect this relationship to bear a great deal of influence when students rate the effectiveness of their principal. This is probably what happened in the present situation; student rated principal effectiveness was best predicted by subtests measuring leader behavior, namely, Thrust and Aloofness.

The fact that Thrust rather than Production Emphasis was the best predictor of student rated principal effectiveness causes one to speculate on the difference between the two subtests. Both are measures of leader behavior; however, the pattern in which they correlate with different criterion variables might lead to the following conclusion. Both subtests show desirable goal-oriented leader behavior; however, Production Emphasis is aimed more at guiding and influencing teachers, and is not overtly evident to the students, whereas, Thrust is behavior of the principal which is more overtly evident to the students. An examination of the items substantiates this distinction. Some characteristic items of each subtest are as follows:

Thrust

1. The principal goes out of his way to help teachers.
2. The principal uses constructive criticism.
3. The principal sets an example by working hard himself.
4. The principal explains his reasons for criticism to teachers.
5. The principal is easy to understand.
6. The principal is well prepared when he speaks at school functions.

Production Emphasis

1. The principal checks the subject matter ability of teachers.

2. The principal corrects teacher's mistakes.
3. The principal makes all class scheduling decisions.
4. The principal schedules the work for the teachers.¹⁸

An examination of the items reveals that a principal high in Thrust goes out of the way to help his teachers, uses constructive criticism, sets an example by working hard himself, is easily understood, and so on. It would seem obvious that students would not only be cognizant of this behavior in the interaction of the principal with the teachers, but also in that this behavior would more than likely prevail in a principal's relations with his students. Opposed to this, an analysis of Production Emphasis items reveals that this type of behavior may not be too evident to students, but would manifest itself more through the behavior of teachers since it is more teacher directed.

Thus, two dimensions of leader behavior appear evident; Thrust is a generalized type of behavior directed at motivating teachers and students through good example, whereas Production Emphasis is directed more at teachers for purposes of directing and moving the organization. In view of this it is understandable why Thrust should be the best predictor of student rated principal effectiveness.

Aloofness, the next best predictor is negatively correlated with the criterion; it also shows a negative beta weight in the multiple regression procedure. This negative correlation makes the relationship readily understandable. Thrust and Aloofness are opposite poles of a

¹⁸Halpin and Croft, op. cit., p. 31.

continuum--one showing consideration, good example, hard work and good organization--the other shows coolness, aloofness, haughtiness, and lack of friendliness and consideration. This may serve to explain why Aloofness is negatively correlated with student rated principal effectiveness.

It is interesting to note that the principal is also rated in terms of Esprit, a group characteristic. A significant correlation of .31 would illustrate that students rate principal effectiveness not only in terms of his own actions but also in terms of the feelings of the whole group.

In sum, it seems to be that the students gauge principal effectiveness in two ways: first, in the way he behaves in the capacity of a principal, and second, in the extent to which teachers find the school a happy and satisfying place to work.

V. HYPOTHESIS V

Hypothesis V states that subtests of the OCDQ are related to student attendance and to student drop-out rate. This section deals with the analysis carried out in testing the hypothesis.

Discussion

An examination of Table XXXII shows that no significant Pearson's r 's or multiple R 's were found between student attendance and OCDQ subtests. However, it is interesting to note that the first four subtests which ranked as the best predictors of student attendance, namely, Intimacy, Esprit, Thrust and Consideration, are components of dimensions

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TABLE XXXII

MULTIPLE REGRESSION PREDICTION OF STUDENT
ATTENDANCE BY OCDQ SUBTESTS

OCDQ Subtest Scores	Correlation with Student Attendance	Beta Weight ($b_0=94.642$)	t-Value Significance of Last Added Predictor	% of Variation Accounted for Stepwise	Multiple Correlation R
Intimacy	.21 ^a	.0368		4.48	.212
Esprit	-.12	-.0655	1.25	2.64	.267
Thrust	.15	.0561	3.30	6.61	.371
Consideration	-.10	-.0311	2.15	4.20	.424
Prod. Emphasis	.10	.1787	0.19	0.38	.428
Hindrance	-.03	-.1251	0.32	0.66	.437
Disengagement	-.01	-.1283	0.15	0.30	.439
Alloofness	-.09	-.2431	0.01	0.02	.439
Total				19.30	

^a No significant Pearson's r's or multiple R's were found at the .05 or .01 level.

associated primarily with social needs satisfaction--the first two pertaining primarily to the group and the second two pertaining to the leader.

An analysis of Table XXXIII illustrates that there are no subtests significantly correlated with student drop-out rate. It is interesting to note however that Intimacy is the best predictor of student drop-out. It would appear that the higher the Intimacy in a school, the lower the drop-out.

The hypothesis is not supported. No subtests are related significantly to student drop-out or student attendance.

VI. HYPOTHESIS VI

Hypothesis VI states that certain subtests are better predictors than others of student morale, attitudes, school attendance and drop-out rate, ratings of school, ratings of teacher and principal effectiveness and ratings of teacher likeability. This section deals with the analysis of data concerning the above hypothesis.

Statistical Analysis and Discussion

To test this hypothesis, an analysis of variance for ranked data was computed on the rankings attributed to the subtests on each item by the step-wise regression procedure. Only those items which had a significant multiple correlation at the .05 level or better were included. The rankings of the subtests together with the items included are given in Table XXXIV.

TABLE XXXIII

MULTIPLE REGRESSION PREDICTION OF STUDENT
DROP-OUT BY OCDQ SUBTESTS

OCDQ Subtest Scores	Correlation with Student Drop-out Rate	Beta Weight ($b_0 = 11.264$)	t-Value Significance of Last Added Predictor	% of Variation Accounted for Stepwise	Multiple Correlation R
Intimacy	-.284 ^a	-.1279		8.07	.284
Consideration	.187	.1500	1.89	3.76	.344
Thrust	-.089	-.1057	1.34	2.66	.381
Aloofness	-.056	-.1065	1.88	3.66	.426
Disengagement	.099	.0374	0.19	0.38	.431
Hindrance	.055	-.0237	0.06	0.12	.432
Prod. Emphasis	-.035	-.0180	0.05	0.10	.433
Esprit	-.092	-.0097	0.01	0.02	.434
Total				18.80	

^aNo significant Pearson's r's or multiple R's were found at the .05 or .01 level.

TABLE XXXIV

STEPWISE REGRESSION RANKING OF OCDQ SUBTESTS
BY STUDENT QUESTIONNAIRE ITEMS^a

Student Questionnaire Items	OCDQ SUBTESTS							
	Dis	Hin	Esp	Int	Aloof	Pr Em	Thr	Con
5	1 ^b	7	3	4	5	2	6	8
6	2	4	7	1	8	3	6	5
9	3	5	7	2	6	8	4	1
10	5	3	4	2	1	8	6	7
11	3	8	2	4	5	1	7	6
12	2	5	4	1	6	3	8	7
15	3	2	7	1	6	4	8	5
18	4	5	7	1	3	2	8	6
20	8	2	1	5	3	4	6	7
21	6	2	3	7	4	8	1	5
24	7	6	5	8	1	2	4	3
25	4	2	1	8	5	7	3	6
26	6	7	4	5	8	3	1	2
27	3	2	7	1	8	5	4	6
29	2	3	5	6	8	1	4	7
30	2	5	4	7	3	1	6	8
31	7	4	2	5	8	1	3	6
32	7	5	4	6	2	3	1	8
33 (Morale)	3	4	5	1	6	2	8	7
Totals	78	81	82	75	96	68	94	110
Ranking	3	4	5	2	7	1	6	8

^aOnly questionnaire items are included which yielded significant multiple correlations.

^bAll subtests are included whether or not they added significantly to the prediction of the item.

Using the data from Table XXXIV χ^2 ranks = 519.5. With a critical value of 24.32 with 7 degrees of freedom, the chi square value of 519.5 is highly significant. The conclusion can then be drawn that the rankings are different and that they, in fact, do show a general order of weighting in the prediction of item scores. Hence hypothesis VI is supported. Turning to Table XXXIV again, it is seen that the subtests, in order of predictive effectiveness, are arranged in the following order:

1. Production Emphasis
2. Intimacy
3. Disengagement
4. Hindrance
5. Esprit
6. Thrust
7. Aloofness
8. Consideration

To facilitate the interpretation of data, Table XXXV which shows the distribution of positive and negative correlations for each of the subtests in the nineteen items was also drawn up. Of interest are the sums of positive and negative correlations over these same items. It is made apparent that some subtests are positively correlated with student attitudes and some are negatively correlated over all the items; others seem to show both positive and negative correlations with the items.

The finding that the best three predictors fall in the order of Production Emphasis, Intimacy, and Disengagement is no real surprise at this point--this ranking was becoming evident during the testing of the

TABLE XXXV

POSITIVE AND NEGATIVE CORRELATIONS OF OCDQ
SUBTESTS WITH STUDENT QUESTIONNAIRE ITEMS

Student Questionnaire Items	OCDQ SUBTESTS							
	Dis	Hin	Esp	Int	Aloof	Pr Em	Thr	Con
5 ^a	-	-	+	+	+	+	+	-
6	-	-	+	+	-	+	+	-
9	-	+	+	+	-	-	+	+
10	-	+	+	+	-	+	+	+
11	-	-	+	-	-	-	+	-
12	-	+	+	+	-	+	+	-
15	-	+	+	+	-	+	+	-
18	-	-	+	+	-	+	+	-
20	-	+	+	+	-	+	+	+
21	-	+	+	+	-	+	+	+
24	+	+	-	-	+	+	+	+
25	-	+	+	+	-	+	+	+
26	-	-	+	-	-	+	+	+
27	-	+	-	+	+	+	-	-
29	-	+	+	+	-	+	+	+
30	-	-	+	+	+	+	+	+
31	-	-	+	-	-	+	+	+
32	-	-	+	+	-	+	+	+
33 (Morale)	-	+	+	+	-	+	+	+
Total Positive	1	11	17	15	4	17	18	12
Total Negative	18	8	2	4	15	2	1	7
SUM	19	19	19	19	19	19	19	19

^aOnly questionnaire items which showed significant correlations with the subtests were included.

first five hypotheses. Because a comprehensive treatment of each subtest was given in the various preceding sections, no further discussion of their characteristics is given here. The only point that will be made is that, in referring to Table XXXV, it becomes evident that Production Emphasis and Intimacy are clearly desirable characteristics in that they show consistently positive correlations with student attitudes whereas Disengagement is clearly an undesirable staff attribute in that it shows consistently negative correlations with student attitudes. This statement is made on the assumption that student attitudes are valid criteria for determining the desirability of principal-teacher behavior as described by the subtests.

The fact that Hindrance was ranked the fourth best indicator is somewhat surprising when the following facts are taken into account: first, eleven of the correlations show positive associations with student attitudes; and secondly, the definition given the subtest by the test constructors makes the test definitely a measure of an undesirable group characteristic. A certain disparity exists between theoretical speculation and empirical evidence. Even an examination of the following items from the Hindrance subtest does not help solve the problem.

1. Routine duties interfere with the job of teaching
2. Administrative paper work is burdensome at this school.
3. Student progress reports require too much work.
4. Teachers have too many committee requirements.¹⁹

¹⁹Ibid., p. 30.

Clearly the items seem to portray undesirable school characteristics, and yet there are the positive correlations with desirable attitudes. The problem cannot be analyzed further in this investigation due to the absence of necessary additional data.

That the subtests *Esprit*, *Thrust*, *Aloofness* and *Consideration* are not too effective predictors is also surprising. A possible explanation may be in the phenomenon of multiple correlation itself; this is that usually the first four or five predictors take care of most of the sample variance that there is to be accounted for. Following this line of thinking it seems reasonable to conclude that the variances of *Thrust* and *Consideration* might have been absorbed by *Production Emphasis* and the variance of *Aloofness* might have been absorbed by *Disengagement*.

VII. SOME RELATED FINDINGS

As a result of the analysis of the data collected, some findings were obtained which, although they do not deal directly with the hypotheses, seem important enough to warrant including them in the report.

Correlations of Teacher with Student Ratings

Data were available on teacher judgement of school effectiveness, teacher satisfaction with school and teacher judgement of principal effectiveness. These were correlated with student rated school effectiveness and student morale. An examination of Table XXXVI reveals that teacher rated school effectiveness correlates relatively highly with student rated school effectiveness (.555) and student morale (.419) and less highly but still significantly with student rated principal effec-

tiveness (.340). Teacher satisfaction with school did not correlate significantly with any of the variables. Teacher rated principal effectiveness correlates significantly only with student rated school effectiveness (.293). It does not correlate with any of the other student variables. It is interesting to note that teacher rated principal effectiveness did not correlate significantly with student rated principal effectiveness (.266).

TABLE XXXVI
CORRELATIONS BETWEEN CERTAIN TEACHER
AND STUDENT RATINGS

Student Variables	Teacher Variables		
	Teacher Rated School Effectiveness	Teacher Satisfaction with School	Teacher Rated Principal Effectiveness
Student Rated School Effectiveness	<u>.555^a</u>	.184	<u>.293</u>
Student Rated Teacher Effectiveness	.254	.068	.179
Student Rated Teacher Likeability	.169	.118	.133
Student Rated Principal Effectiveness	<u>.340</u>	.224	.266
Student Morale	<u>.419</u>	.178	.249

^aCorrelations underlined with two lines are significant at the .01 level; with one line, at the .05 level.

Climate Categorizations

Since the concept of Climate as defined by Halpin and Croft is rather recent, and since it has not been researched too extensively, it

was felt that it would be beneficial to include the climate categorizations in this investigation and to correlate them with some of the student attitudinal variables. In the analysis of the data, no significant correlations were found between climate categorization and any student variables. It seems then that the climate categorization as conceived at the present time may not have too much value for research related to student variables.

CHAPTER VII

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This study was designed for the purpose of investigating the relationship between different school climate characteristics as measured by the subtests of the Organizational Climate Description Questionnaire and student morale, attitudes, attendance and drop-out rate. The instrument used to measure climate characteristic, the OCDQ, was only recently developed, and consequently its scope and possibilities are rather untried; hence, the study was in some ways exploratory. In spite of this, it was anticipated that the results might give some indication of the role that the principal and school climate play in determining the various student variables mentioned above. In this final chapter the main features of the investigation are summarized and some general implications for students of educational administration, practicing administrators, teacher training institutions and school boards are proposed.

I. SUMMARY OF THE STUDY

In the development of background theory, examples of research and thinking in the fields of industrial and labor personnel management were presented and analyzed. Some of these investigations showed that higher level supervisors affected lower level supervisors in the way they managed subordinate personnel, and that this type of supervision was eventually passed on to the worker. Most important, it was shown that

different types of supervision have different effects on worker output, attitudes, morale, and other concomitant variables.

The investigator made use of this knowledge in the development of theory basic to the present problem. It was theorized that the school climate resulting from principal-teacher interaction would affect teachers' feelings, behaviors and actions which would in turn affect classroom climate. Central to this problem was the hypothesizing that different school climate characteristics would differently influence student morale, attitudes, the way they rated the effectiveness of their school, teachers and principal, and in their attendance and drop-out rates.

The sample used in the study designed to test these hypotheses consisted of forty-seven schools drawn from a larger sample of 185 which participated earlier in the year in a CSA clinic on organizational climate. Geographically, a major proportion of the investigator's sample consisted of larger non-urban schools which were distributed throughout most of Alberta. Student questionnaires were completed by a random sample of grade ten students drawn from each of the forty-seven schools.

The sum of scores of items two to twenty-eight in the student questionnaire averaged over all the students who responded in that school was used as an indicator of student morale in a given school. No significant correlations were found between any of the subtests and student morale; however, the step-wise regression technique indicated that the three subtests, Intimacy, Production Emphasis and Disengagement acting together produced a significant multiple R.

In connection with testing this hypothesis, an attempt was made to determine whether characteristics other than climate were related to student morale. The factors investigated were type of school, size of school, experience of principal as principal, principal tenure in a school, age of principal, and amount of graduate training in educational administration. A chi square calculated between distributions of high and low student morale schools on each of the factors named above showed no significant relationships with any of them except possibly in morale by type of school. A chi square between probability levels of .20 and .10 on uncombined frequencies, between probability levels of .02 and .01 on combined frequencies, would tend to lean in the direction of indicating that the type of school which includes grades 1 - 12 has a lower morale than schools which included only grades 7 - 12, 9 - 12, or 10 - 12.

Correlations between subtests and items in various descriptive student attitudinal categorizations partially substantiated the second hypothesis. It was found that none of the items showed significant correlations with Disengagement, Hindrance and Consideration. Most of the associations were found in negative correlations with Aloofness, positive correlations with either Esprit or Intimacy, and positive correlations with either Production Emphasis or Thrust. Utilizing the multiple correlation technique, the predictions took on a different form due to the peculiarity of the statistical procedure itself--the predictors are ranked in the order in which they individually account for different variances in criterion variables.

The third hypothesis was designed to test whether correlations existed between school climate characteristics and student rated school

effectiveness, student rated teacher effectiveness, and student rated teacher likeability. It was found that Production Emphasis and Thrust correlated with the first, and Production Emphasis alone with the last two criterion variables. The step-wise regression technique illustrated that Production Emphasis and Disengagement were the best predictors of the first two variables, and that Production Emphasis by itself was the sole best predictor of student rated teacher likeability.

The rating which students gave a principal took a different pattern of correlations with school climate characteristics than the above three; Thrust, Aloofness and Esprit were found to be significantly correlated with ratings of the principal. It appears that the effectiveness of a principal was judged directly in terms of student perception of him rather than in terms of principal-teacher-student interaction.

It was found that no subtests correlated significantly with student attendance, although Intimacy, with a correlation of .21 was revealed as the best predictor in the step-wise regression technique. No subtest correlated significantly with student drop-out rate. Also, no significant multiple R was found. However, Intimacy with a correlation of $-.284$ was found to be the best predictor of student drop-out rate. The hypothesis was not considered to be substantiated.

Finally, it was hypothesized that some of the climate characteristics would be more efficient than others in predicting the various student criterion variables. The analysis of variance of ranked data substantiated this hypothesis. The order in which the subtests were ranked in the over-all pattern in determining student attitudes was as

follows: Production Emphasis, Intimacy, Disengagement, Hindrance, Esprit, Thrust, Aloofness, and Consideration.

II. CONCLUSIONS AND IMPLICATIONS

In this section of the chapter a number of conclusions derived from the study and some possible implications for various individuals and groups are outlined.

Conclusions

1. Subtests of the OCDQ are useful in predicting characteristics of school climate at the student level as defined by student morale and attitudes. Recently some studies were carried out which cast doubt on the value of utilizing the Climate categorizations of the OCDQ for purposes of studying various student attributes, but which found that the subtests were more valid and useful. Results of this study support these findings. Different subtests were differentially related to different student variables, but no significant correlations were found when climate categorizations were used.

2. Student morale as defined in this study does appear to be related to the OCDQ subtests Intimacy, Production Emphasis and Disengagement, positively to the first two and negatively to Disengagement. Results seem to indicate a relationship between morale and type of school. Morale does not appear to be related to size of school, experience of principal as principal, tenure in a school, age of principal, and amount of graduate training in educational administration.

3. Student rated school effectiveness, student rated teacher effectiveness and student rated teacher likeability appear to be best pre-

dicted by Production Emphasis and Disengagement.

4. Student rated principal effectiveness is related positively to Thrust and negatively to Aloofness.

5. Student attendance rate and drop-out rate do not seem to be related significantly to any subtests, although Intimacy is the best predictor of both variables.

6. Statistical evidence disclosed that the subtests generally exert different weights in the prediction of student variables. These in order of rank are: Production Emphasis, Intimacy, Disengagement, Hindrance, Esprit, Thrust, Aloofness, and Consideration.

7. The findings indicated that there may be some discrepancy between given definitions of the subtests and results obtained in empirical utilization. Of the subtests, Intimacy appears to be more than just a measure of friendly relations between teachers. There is a likelihood that this friendliness might be a superficial measure of a very powerful and influential staff characteristic--probably more so than Esprit.

Further, it does appear that Production Emphasis may have some components quite different from what it is purposed to be and do. Rather than being solely an undesirable aspect of principal behavior, the findings in this study indicated that it manifests itself to some extent as a desirable principal characteristic in determining student morale, attitudes and other variates. It appears to indicate to some extent a measure of a principal who is a strong leader and organizer in his school. Consequently, an emphasis on behavior such as shown by the subtest Production Emphasis not only may not be a harmful feature of

principal behavior but may be desirable in that it is significantly positively influential in determining student variates.

Disengagement does definitely come out to be an undesirable characteristic. Again, there is the likelihood that Hindrance, in that it shows more positive than negative correlations is less of an undesirable staff characteristic than might be supposed considering the student variables dealt with. There is some indication that it might take on attributes similar to Production Emphasis. Aloofness appears to be an undesirable principal characteristic. Its relationship with student variables discussed is consistently negative. Results of the study indicate Thrust to be a significant principal characteristic in determining student rating of the principal.

8. Indications point in the direction that there may be a need for further consideration regarding the placement of some items, the refinement of the subtests and the revision of the OCDQ instrument, particularly if it is used in research relating school climate to student behavior and attitudes.

9. It also seems plausible that the behavior of the principal is highly important in a school setting. It is evident that a principal is influential in determining student morale, attitudes, and possibly achievement.

10. Finally, it seems reasonable to conclude that the climate of a school is an important factor in determining student morale and attitudes.

Implications

1. Findings of this investigation are of definite significance to the practicing administrator. Generally a school principal does not have any clear idea regarding what direction his behavior should take in his attempt to create a school climate conducive to teacher and student well-being. Some indication of this behavior, with students as the referents, is given by findings of this study. Firstly, students would seem to prefer as principal a person who goes out of the way to help students and teachers; who sets an example of hard work by working hard himself; who, when criticism is needed, uses constructive criticism and gives reasons for the criticism; who looks out after the welfare of teachers and students, and who informs students and teachers of new ideas. Secondly, students (and teachers) do not like a principal who is aloof, very business-like, cold, inconsiderate, and unfriendly. Teachers and students prefer a principal to be approachable. Thirdly, in spite of the fact that a principal should be friendly, approachable, considerate and human in his dealings with students and staff, it should not be forgotten that students also rate a principal in terms of Production Emphasis. This means that students rate a principal highly who can organize things well, who schedules class and teacher work, who insists on good work, who corrects teachers' mistakes, and who is and acts like a good leader. The point to note, however, at this instance is that Production Emphasis and teacher evaluation of a principal show positive but almost negligible correlation. This seems to present a dilemma to the practicing principal. Also, the characteristics outlined above ostensibly pose impossibly

idealistic demands on the principal. This all the more points out the need for knowledgeable and trained administrators. The discussion presented is indicative of the second implication, namely, that of significance for administrator training institutions.

2. Two points seem to be particularly pertinent for these institutions. First, it is evident that the position of principal is very important, hence careful selection of candidates for the training of principals is necessary; every teacher may not be a potential principal ipso facto. Second, with increasing knowledge regarding the demands of the principalship, these institutions can train potential principals in skills required by a principal. It would appear then that post graduate training, with teaching specifically along these lines, would be desirable.

3. The third implication is directed towards superintendents, school boards and others engaged in hiring principals. Since the position of a principal is important to the total organization of a school, the selection of a principal should be done very carefully and on the basis of pre-developed criteria.

4. The fourth and final implication is of significance for researchers in educational administration. Two instruments were used in this study; one rather well developed but possibly in need of refinement, and the other in need of much more extensive development, but potentially a powerful and useful tool. The findings in this study seem to indicate that more revisions, refinement and some redefinitions would be desirable regarding the OCDQ. However, it has the potential of

a very useful instrument for purposes of school climate studies.

The instrument used to measure student morale is in an early stage of development. However, it too has potential and merits further extension and refinement. It would be desirable to add items to the questionnaire and to group them into subtests through item analysis and the statistical technique of factor analysis. It is only with such improvement that an appropriate student climate questionnaire can be developed.

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APPENDIX A

ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

ORGANIZATIONAL CLIMATE DESCRIPTION QUESTIONNAIRE

Developed by

ANDREW W. HALPIN

and

DON B. CROFT

On the following pages is a list of items that are used to describe the organizational climate or the "personality" of your school. The items describe typical behaviors or conditions that occur within a school. Please indicate to what extent each of these descriptions characterizes **your school**. Please do **not** evaluate the items in terms of "good" or "bad" behavior but read each item carefully and respond in terms of how well the statement describes your school.

It is important that your answers be "independent," so please do not discuss your answers with other teachers. Though there is no time limit, it will probably take you 15 to 20 minutes to complete.

Please be frank in your response with the assurance that individual responses are strictly confidential.

IDENTIFICATION: Please write the name and address of your school on the envelope provided for the completed questionnaire; do **NOT** write your name on this questionnaire.

Each questionnaire will be given a code number and all responses transferred to IBM cards for processing. Complete anonymity in the analysis of data and the reporting of findings is assured.

DIRECTIONS:

- a. READ each item carefully.
- b. THINK about how well the statement describes your school.
- c. DECIDE whether the behavior or condition described in the item occurs rarely, sometimes, often, or very frequently in your school.
- d. DRAW A CIRCLE around **one** of the four letters following the item to show the answer you have selected.

A=Very frequently occurs

B=Often occurs

C=Sometimes occurs

D=Rarely occurs

Please respond to EVERY item.

- | | | | | |
|---|---|---|---|---|
| 1. Teachers' closest friends are other faculty members at this school. | A | B | C | D |
| 2. The mannerisms of teachers at this school are annoying. | A | B | C | D |
| 3. Teachers spend time after school with students who have individual problems. | A | B | C | D |
| 4. Instructions for the operation of teaching aids are available. | A | B | C | D |
| 5. Teachers invite other faculty members to visit them at home. | A | B | C | D |
| 6. There is a minority group of teachers who always oppose the majority. | A | B | C | D |
| 7. Extra books are available for classroom use. | A | B | C | D |
| 8. Sufficient time is given to prepare administrative reports. | A | B | C | D |
| 9. Teachers know the family background of other faculty members. | A | B | C | D |
| 10. Teachers exert group pressure on non-conforming faculty members. | A | B | C | D |
| 11. In faculty meetings, there is the feeling of "let's get things done." | A | B | C | D |
| 12. Administrative paper work is burdensome at this school. | A | B | C | D |
| 13. Teachers talk about their personal life to other faculty members. | A | B | C | D |
| 14. Teachers seek special favors from the principal. | A | B | C | D |
| 15. School supplies are readily available for use in classwork. | A | B | C | D |
| 16. Student progress reports require too much work. | A | B | C | D |
| 17. Teachers have fun socializing together during school time. | A | B | C | D |
| 18. Teachers interrupt other faculty members who are talking in staff meetings. | A | B | C | D |
| 19. Most of the teachers here accept the faults of their colleagues. | A | B | C | D |
| 20. Teachers have too many committee requirements. | A | B | C | D |
| 21. There is considerable laughter when teachers gather informally. | A | B | C | D |
| 22. Teachers ask nonsensical questions in faculty meetings. | A | B | C | D |
| 23. Custodial service is available when needed. | A | B | C | D |
| 24. Routine duties interfere with the job of teaching. | A | B | C | D |
| 25. Teachers prepare administrative reports by themselves. | A | B | C | D |

26. Teachers ramble when they talk in faculty meetings.	A	B	C	D
27. Teachers at this school show much school spirit.	A	B	C	D
28. The principal goes out of his way to help teachers.	A	B	C	D
29. The principal helps teachers solve personal problems.	A	B	C	D
30. Teachers at this school stay by themselves.	A	B	C	D
31. The teachers accomplish their work with great vim, vigor, and pleasure.	A	B	C	D
32. The principal sets an example by working hard himself.	A	B	C	D
33. The principal does personal favors for teachers.	A	B	C	D
34. Teachers eat lunch by themselves in their own classrooms.	A	B	C	D
35. The morale of the teachers is high.	A	B	C	D
36. The principal uses constructive criticism.	A	B	C	D
37. The principal stays after school to help teachers finish their work.	A	B	C	D
38. Teachers socialize together in small select groups.	A	B	C	D
39. The principal makes all class-scheduling decisions.	A	B	C	D
40. Teachers are contacted by the principal each day.	A	B	C	D
41. The principal is well prepared when he speaks at school functions.	A	B	C	D
42. The principal helps staff members settle minor differences.	A	B	C	D
43. The principal schedules the work for the teachers.	A	B	C	D
44. Teachers leave the grounds during the school day.	A	B	C	D
45. Teachers help select which courses will be taught.	A	B	C	D
46. The principal corrects teachers' mistakes.	A	B	C	D
47. The principal talks a great deal.	A	B	C	D
48. The principal explains his reasons for criticism to teachers.	A	B	C	D
49. The principal tries to get better salaries for teachers.	A	B	C	D
50. Extra duty for teachers is posted conspicuously.	A	B	C	D
51. The rules set by the principal are never questioned.	A	B	C	D
52. The principal looks out for the personal welfare of teachers.	A	B	C	D
53. School secretarial service is available for teachers' use.	A	B	C	D
54. The principal runs the faculty meeting like a business conference.	A	B	C	D
55. The principal is in the building before teachers arrive.	A	B	C	D
56. Teachers work together preparing administrative reports.	A	B	C	D
57. Faculty meetings are organized according to a tight agenda.	A	B	C	D
58. Faculty meetings are mainly principal-report meetings.	A	B	C	D
59. The principal tells teachers of new ideas he has run across.	A	B	C	D
60. Teachers talk about leaving the school system.	A	B	C	D
61. The principal checks the subject-matter ability of teachers.	A	B	C	D
62. The principal is easy to understand.	A	B	C	D
63. Teachers are informed of the results of a supervisor's visit.	A	B	C	D
64. The principal insures that teachers work to their full capacity.	A	B	C	D

(OVER)

SOME INFORMATION ABOUT YOU AND YOUR SCHOOL

65. Number of teachers in your school, including the principal (check one):
- (1) 4 or fewer
 - (2) 5 to 9
 - (3) 10 to 14
 - (4) 15 to 19
 - (5) 20 to 24
 - (6) 25 to 29
 - (7) 30 to 39
 - (8) 40 to 49
 - (9) 50 or more
66. What grades does your school include? Check the one below which most closely describes your school.
- (1) Gr. 1 to 6
 - (2) Gr. 1 to 8
 - (3) Gr. 1 to 9
 - (4) Gr. 1 to 11
 - (5) Gr. 1 to 12
 - (6) Gr. 7 to 9
 - (7) Gr. 7 to 12
 - (8) Gr. 9 to 12
 - (9) Gr. 10 to 12
67. How long have you been in your present school, including this year?
- (1) 1 yr.
 - (2) 2 yrs.
 - (3) 3 or 4 yrs.
 - (4) 5 or 6 yrs.
 - (5) 7 to 8 yrs.
 - (6) 9 or 10 years
 - (7) 11 to 15 yrs.
 - (8) 16 to 20 yrs.
 - (9) 21 yrs. or more
68. How many years of teaching experience do you have, including the present year?
- (1) 1 yr.
 - (2) 2 yrs.
 - (3) 3 or 4 yrs.
 - (4) 5 or 6 yrs.
 - (5) 7 or 8 yrs.
 - (6) 9 or 10 yrs.
 - (7) 11 to 15 yrs.
 - (8) 16 to 20 yrs.
 - (9) 21 yrs. or more
69. Your sex:
- (1) Male
 - (2) Female
70. What is your age?
- (1) under 24 yrs.
 - (2) 25-29 yrs.
 - (3) 30-34 yrs.
 - (4) 35-39 yrs.
 - (5) 40-44 yrs.
 - (6) 45-49 yrs.
 - (7) 50-54 yrs.
 - (8) 55-59 yrs.
 - (9) 60 yrs. and over
71. How many years of training are you credited with for salary purposes? (Please drop fractional years).
- (1) 1 yr.
 - (2) 2 yrs.
 - (3) 3 yrs.
 - (4) 4 yrs.
 - (5) 5 yrs.
 - (6) 6 yrs.
72. Compared with other schools known to you, how good a job do you judge your school does in educating the students who come to it? (check one)
- (1) outstanding
 - (2) very good
 - (3) slightly above average
 - (4) slightly below average
 - (5) poor
 - (6) very poor
73. If you are the principal please check here (1) and omit the next two items.
74. How well satisfied are you with all aspects of your teaching situation in your present school? (check one)
- (1) enthusiastic
 - (2) satisfied
 - (3) fairly well satisfied
 - (4) somewhat dissatisfied
 - (5) dissatisfied
 - (6) very dissatisfied
75. How effective do you consider your principal to be in performing all the various functions which he should perform? (This item is for research purposes only and even averages of scores are strictly confidential).
- (1) outstanding,
 - (2) very good
 - (3) slightly above average
 - (4) slightly below average
 - (5) poor
 - (6) very poor

76. 77. 78. 79. 80.

(Thank you. Write name and address of school on envelope)

APPENDIX B
STUDENT QUESTIONNAIRE

HOW I FEEL ABOUT MY HIGH SCHOOL

Developed by

J. K. Coster

Please state the name of your school _____

Please state the address of your school _____

I am conducting a survey of the opinion, beliefs, and feelings of a large number of high school students like yourself. I would like to find out how you feel and what you think about your high school. Your answers to the questions will provide us with information which will help us in improving our high schools.

This is NOT a test. There are no right answers. YOUR OPINIONS OR ANSWERS ARE THE ONES IN WHICH I AM INTERESTED AND THE ONES THAT I WANT. I would like you to be very frank in making your selections. PLEASE DO NOT WRITE YOUR NAME ON THIS PAPER OR OTHERWISE IDENTIFY YOURSELF. You are assured that no one in your high school will see your papers. You may be certain, therefore, that the way in which you answer these questions definitely will NOT affect your standing in your high school.

The questionnaire consists of thirty-one questions about many parts of your high school. Following each question is a list of five possible answers. Please read each question carefully. Then carefully read ALL five answers and select the ONE answer with which you agree most fully. (If none of the possible answers exactly express your opinion, you are asked to select the answer that most nearly expresses it.) After you have made your selection, mark and "X" on the short line in front of the answer which you chose. The example below shows how your answer should be marked:

EXAMPLE: On the average, is Alaska warmer or colder than Hawaii?

- ____ (1) Alaska is much warmer than Hawaii.
- ____ (2) Alaska is slightly warmer than Hawaii.
- ____ (3) Alaska is neither warmer nor colder than Hawaii.
- ____ (4) Alaska is slightly colder than Hawaii.
- x (5) Alaska is much colder than Hawaii.

Number 5 is the best answer; therefore, an "x" was placed on the line in front of that number.

Please work rapidly, but carefully. However, there is no limit on the time which you may have for answering the questionnaire. Answer ALL questions. Do not mark more than one answer under each question. If you have additional questions about the questionnaire, you may ask the person or persons in charge. If you have no questions, you may begin.

HOW I FEEL ABOUT MY HIGH SCHOOL

1. I am:
____(1.1) A Boy
____(1.2) A Girl
2. Do you believe that the work that you are taking in high school will be useful to you after you leave high school?
____(2.5) Yes! I am certain that my high school work will help me a great deal.
____(2.4) I feel that my high school work generally will be useful.
____(2.3) I feel that my high school work will be of some use to me.
____(2.2) I feel that my high school work will be of little use to me.
____(2.1) No! I am certain that my high school work will be of NO use to me.
3. Do you feel that your teachers treat you fairly?
____(3.5) Yes! My teachers always treat me fairly.
____(3.4) My teachers usually treat me fairly.
____(3.3) Sometimes my teachers treat me fairly; sometimes they don't.
____(3.2) My teachers usually do NOT treat me fairly.
____(3.1) No! My teachers never treat me fairly.
4. What is your opinion of your chances of getting the kind of job that you would like to have after you leave high school (or college, if you plan to attend)?
____(4.1) I feel that I have a very poor chance of getting the kind of job I want.
____(4.2) I feel that I have a poor chance of getting the kind of job I want.
____(4.3) I feel that my chances are about average.
____(4.4) I feel that I have a good chance of getting the kind of job I want.
____(4.5) I feel that I have an excellent chance of getting the kind of job I want.
5. How interesting, do you feel, is your high school work to you?
____(5.5) All of my high school work is interesting to me.
____(5.4) Most of my high school work is interesting to me.
____(5.3) About half of my high school work is interesting to me.
____(5.2) Little of my high school work is interesting to me.
____(5.1) None of my high school work is interesting to me.
6. What is your opinion of the working and studying conditions in your high school?
____(6.1) Our working and studying conditions are very poor! They couldn't be worse!
____(6.2) I feel that they are poor.
____(6.3) I feel that they are about average.
____(6.4) I feel that they are good.
____(6.5) Our working and studying conditions are excellent! They couldn't be better.

7. Do you feel that the other students in your high school like you?
___(7.1) No! I feel that NONE of the other students in my high school like me.
___(7.2) I feel that only a few of the other students like me.
___(7.3) Some of the other students like me; some don't.
___(7.4) I feel that most of the other students like me.
___(7.5) Yes! I feel that ALL of the other students in my high school like me.
8. What is your general feeling of the high school that you are now attending?
___(8.5) There is no other high school that I would like as well as this one.
___(8.4) Generally, I am satisfied with my high school.
___(8.3) I feel that this is an average high school.
___(8.2) Generally, I am NOT satisfied with this high school.
___(8.1) I feel that this is the worst high school that I could attend.
9. Do you believe that your parents are interested in your high school work?
___(9.5) Yes! I am sure that my parents are highly interested in my high school work.
___(9.4) On the whole, I feel that they are interested in my high school work.
___(9.3) Sometimes I feel that they are interested; sometimes I feel that they aren't.
___(9.2) On the whole, I feel that they are NOT interested in my high school work.
___(9.1) No! I am certain that my parents are NOT interested in my school work.
10. What is your opinion of the number of activities--such as clubs, dances, parties, and sports--in your high school?
___(10.1) I am greatly dissatisfied with the small number of activities.
___(10.2) On the whole, I feel that we DON'T have enough activities in this school.
___(10.3) We have a fair number of activities, but we should have more.
___(10.4) On the whole, I feel that we have enough activities in our high school.
___(10.5) I am very well satisfied with the number of activities in our high school.
11. What, in general, is your opinion of the teachers in your high school?
___(11.5) No other high school has a better group of teachers than ours.
___(11.4) I believe that we have a good group of teachers in our high school.
___(11.3) I feel that we have an average group of teachers in this high school.
___(11.2) I believe that we have a poor group of teachers in this high school.
___(11.1) No other high school has a poorer group of teachers than this one!

12. What is your opinion of the group of subjects (or courses) that is offered in your high school?
- ___(12.1) No high school student should have to study these subjects!
 - ___(12.2) I feel that this high school offers a poor group of subjects.
 - ___(12.3) This high school offers a fair group of subjects.
 - ___(12.4) I feel that this high school offers a good group of subjects.
 - ___(12.5) I couldn't ask for a better group of subjects!
13. Do you feel that your high school work is the kind of work that you like to do?
- ___(13.5) Yes! All of my high school work is the kind of work that I like to do.
 - ___(13.4) Most of my high school work is the kind of work that I like to do.
 - ___(13.3) Some of my high school work is the kind that I like to do; some is not.
 - ___(13.2) Little of my high school work is the kind of work that I like to do.
 - ___(13.1) No! None of my high school work is the kind of work that I like to do.
14. Do you believe that your high school teachers are personally interested in you?
- ___(14.1) No! I feel that my high school teachers are NOT interested in me.
 - ___(14.2) Generally, I DON'T believe that they are interested in me as a person.
 - ___(14.3) Sometimes I feel that my teachers are personally interested in me.
 - ___(14.4) Generally, I believe that they are interested in me as a person.
 - ___(14.5) Yes! I definitely feel that my teachers are interested in me as a person.
15. In your opinion, how do people in your community feel about your high school?
- ___(15.1) The people are greatly dissatisfied with this high school.
 - ___(15.2) Generally, they are dissatisfied with this high school.
 - ___(15.3) About half of the people in this community are satisfied with the school.
 - ___(15.4) Generally, they are satisfied with our high school.
 - ___(15.5) The people are very well satisfied with our high school.
16. How do you feel about the way in which your high school subjects are taught?
- ___(16.5) I feel that all of my subjects are taught in an excellent manner.
 - ___(16.4) On the whole, I am satisfied with the way in which they are taught.
 - ___(16.3) Some subjects are taught in a satisfactory manner; others are not.
 - ___(16.2) On the whole, I am dissatisfied with the way in which they are taught.
 - ___(16.1) I am highly dissatisfied with the way in which my subjects are taught.

17. What is your opinion of the help and assistance that your high school teachers give you with your high school work?
- ___(17.1) My high school teachers never help me.
 - ___(17.2) I feel that my high school teachers give me very little help.
 - ___(17.3) Sometimes my teachers give me the help that I need.
 - ___(17.4) My teachers usually help me when I need it.
 - ___(17.5) I feel that my teachers are always very generous with their help.
18. How do you feel about going to adults in your high school--such as teachers, principal, or counselors--to get help and advice regarding your personal problems such as how to improve your appearance, how to act on a date, what subjects to take in high school, or how to get along with other people?
- ___(18.5) I feel that I definitely would want to get help with my problem.
 - ___(18.4) I frequently would want to get help from an adult in my high school.
 - ___(18.3) I would want to get help with some, but not all, personal problems.
 - ___(18.2) I rarely would want to get help from an adult in my high school.
 - ___(18.1) I am sure that I would NOT go to anyone in this high school for help.
19. What is your opinion of the marking and grading system in your high school; that is, how do you feel about the way in which marks or grades are given?
- ___(19.1) I feel that the system in this high school is very unsatisfactory.
 - ___(19.2) Generally, I feel that this school has a poor system.
 - ___(19.3) The system in this high school may be all right, but I don't like it.
 - ___(19.4) Generally, I feel that our high school has a good system.
 - ___(19.5) I feel that our high school has an excellent system.
20. How do you feel about the way in which your high school is organized?
- ___(20.5) The organization is excellent; our high school runs very smoothly.
 - ___(20.4) On the whole, I feel that our high school is well-organized.
 - ___(20.3) The organization of our high school is just "so-so".
 - ___(20.2) On the whole, I feel that this high school is poorly organized.
 - ___(20.1) The organization is very poor; no one knows what is going on.
21. What is your opinion of the school spirit in your high school?
- ___(21.1) There is absolutely NO school spirit in this high school!
 - ___(21.2) The school spirit is low.
 - ___(21.3) The school spirit is about average when compared with other schools.
 - ___(21.4) Our school spirit is high.
 - ___(21.5) Our school spirit is excellent! It couldn't be higher!

22. How do you feel about the social life you are having while attending high school?
- ☐ (22.1) I am greatly disappointed with my social life.
 - ☐ (22.2) Generally, I am dissatisfied with my social life.
 - ☐ (22.3) Sometimes I am satisfied with my social life; sometimes I am not.
 - ☐ (22.4) Generally, I am satisfied with my social life.
 - ☐ (22.5) I am very well satisfied with my social life.
23. Do you feel that going to high school will help you in enjoying life more and in getting more satisfaction from living?
- ☐ (23.1) No! I am certain that going to high school will NOT help me.
 - ☐ (23.2) On the whole, I DON'T believe that going to high school will help much.
 - ☐ (23.3) Going to high school may be of some help to me in enjoying life.
 - ☐ (23.4) On the whole, I feel that going to high school will be helpful.
 - ☐ (23.5) Yes! I am sure that going to high school will help me in enjoying life.
24. How hard do you feel that you are working (or studying) on your school work?
- ☐ (24.1) I never work in high school.
 - ☐ (24.2) Usually I DON'T work very hard in high school.
 - ☐ (24.3) Sometimes I work hard; sometimes I don't.
 - ☐ (24.4) Usually, I work hard in high school.
 - ☐ (24.5) I always work as hard as I can on my high school work.
25. What is your opinion of the other boys and girls in your high school?
- ☐ (25.5) They are the best group of boys and girls in the world!
 - ☐ (25.4) I feel that we have a good group of boys and girls in our high school.
 - ☐ (25.3) Some of the other students are all right; some are not.
 - ☐ (25.2) I feel that this high school has a poor group of boys and girls.
 - ☐ (25.1) They are the worst group of boys and girls in the world!
26. How well, in your opinion, do your high school teachers "know" and understand the subjects that they teach?
- ☐ (26.1) My teachers definitely do NOT "know" and understand their subjects.
 - ☐ (26.2) They don't "know" and understand their subjects as well as they should.
 - ☐ (26.3) Some of my teachers "know" and understand their subjects; some don't.
 - ☐ (26.2) Generally, I feel that they "know" and understand their subjects.
 - ☐ (26.1) My teachers definitely do "know" and understand their subjects.

27. What is your opinion of the equipment and facilities--such as laboratory and shop equipment, books, and desks--in your high school?
- ☐ (27.5) No other high school has better equipment and facilities than ours.
 - ☐ (27.4) Our equipment and facilities are better than those in most schools.
 - ☐ (27.3) The equipment and facilities in our high school are about average.
 - ☐ (27.2) Our equipment and facilities are poorer than those in most schools.
 - ☐ (27.1) No other high school has poorer equipment and facilities than ours!
28. In general, how well do you feel that the other people in your high school treat you?
- ☐ (28.5) I feel that I couldn't be treated better!
 - ☐ (28.4) Generally, I feel that I am treated in a satisfactory manner.
 - ☐ (28.3) Sometimes I am treated all right; sometimes I feel that I am not.
 - ☐ (28.2) Generally, I feel that I am NOT treated very well.
 - ☐ (28.1) I feel that I couldn't be treated worse!
29. In your estimation, how good a job does your school do in educating the students who come to it?
- ☐ (29.6) Outstanding
 - ☐ (29.5) Very good
 - ☐ (29.4) Slightly above average
 - ☐ (29.3) Slightly below average
 - ☐ (29.2) Poor
 - ☐ (29.1) Very poor
30. How good a job do your teachers do in teaching you?
- ☐ (30.6) Outstanding
 - ☐ (30.5) Very good
 - ☐ (30.4) Slightly above average
 - ☐ (30.3) Slightly below average
 - ☐ (30.2) Poor
 - ☐ (30.1) Very poor
31. How well do you like the teachers, as persons, who teach you?
- ☐ (31.6) I like my teachers very much.
 - ☐ (31.5) I like my teachers quite a bit.
 - ☐ (31.4) I like my teachers a little bit.
 - ☐ (31.3) I dislike my teachers a little bit.
 - ☐ (31.2) I dislike my teachers quite a bit.
 - ☐ (31.1) I dislike my teachers very much.
32. How good a job does your principal do as a principal?
- ☐ (32.6) Outstanding
 - ☐ (32.5) Very good
 - ☐ (32.4) Slightly above average
 - ☐ (32.3) Slightly below average
 - ☐ (32.2) Poor
 - ☐ (32.1) Very poor

APPENDIX C

LETTERS TO THE PRINCIPALS

Department of Educational Administration,
University of Alberta,
Edmonton, Alberta,
April 23rd, 1965.

Dear Sir:

I wish to solicit your assistance in gathering data for my thesis entitled "Principal-Teacher Relationship as Measured by the Organizational Climate Description Questionnaire and its Effects on Attitudes and Other Variables of Grade Ten Students." The purpose of the study is to find the relationship between each of the subtests of the Organizational Climate Description Questionnaire and, first, student morale; second, student attitudes towards the teachers, towards the school, towards the school program, towards the appropriateness of school work, towards future expectations, and towards school acceptance; third, student rated school effectiveness, teacher effectiveness, principal effectiveness, and teacher likeability; and fourth, student attendance rate, and student drop-out rate. The results of the study should provide some indication of the extent to which student morale, attitudes, and attendance and drop-out rate are related to principal-teacher interaction.

The OCDQ scores required for this research are available from the CSA studies on school climate which were carried out earlier this year. To determine the attitudes of the students, a questionnaire, developed by J. K. Coster, called "How I Feel About My High School" will be administered to a random sample of sixteen grade ten students in each school chosen. The questionnaire consists of thirty-one items and administration time should be no longer than about thirty minutes.

As principal, your involvement would be as follows. First, your consent to participate in this study is sincerely requested. It is important that as many as possible participate--hence your consent to take part will add greatly to the total findings of the study. Second, you would be asked to name a student from the Student Council to be responsible for the receipt of the questionnaires, their administration and return to me. If no Student Council is organized, can you provide me with the name of some responsible student who will be able to perform these duties? I wish to work through the Student Council because I want to assure students that neither teachers nor principal will see the answered student questionnaires. This is done in order that students may be confident that their responses will not in any way affect their marks in school or their relationships with the principal or the teachers.

I realize that you are very busy at this time of the year, hence a special self-addressed and stamped card is provided for your convenience.

In anticipation of your response, I thank you very much for your assistance.

Yours truly,

JFP/ys
Encl.

J. F. Pyra

The first part of the book is devoted to a general
introduction to the subject of the book. It is
divided into two parts. The first part is devoted
to a general introduction to the subject of the book.
The second part is devoted to a general introduction
to the subject of the book.

The second part of the book is devoted to a
general introduction to the subject of the book.
It is divided into two parts. The first part is
devoted to a general introduction to the subject of
the book. The second part is devoted to a general
introduction to the subject of the book.

Department of Educational Administration,
University of Alberta,
Edmonton, Alberta,
April 30th, 1965.

Dear Sir:

Since sending my first letter to you on the twenty-third of April, I have received your reply signifying that you are willing to assist in my project. Thank you for your kind assistance.

In my first letter of explanation to you I stated that I would be working through the Student Council. However, to keep you informed, I am enclosing the questionnaire which the students will respond to and an instruction sheet which the person named by yourself will follow in administering the questionnaire.

There are, however, two areas in which I would like your assistance. First, can you, or a teacher appointed by yourself, give assistance to the student named and general supervision to the total procedure? This is especially important in drawing up the sample and in supervising the administration of the questionnaire itself.

Second, two variables to which I want to relate principal-teacher relationships are pupil attendance and pupil drop-out rate. Can you then please supply me with that information by completing the form provided below? Please detach the form and insert it in the self-addressed and stamped envelope that is included for your convenience and mail it to me.

Let me state again that your assistance is invaluable--thank you sincerely.

Yours truly,

JFP/ys

Joseph F. Pyra

Please detach along here

- (1) Please state the name of your school _____
(2) Please state the address of your school _____

- (3) State the Percentage of Attendance August%
per month of your grade ten class(es) September.....%
from the beginning of school at fall October%
till the end of March of this year. November%
December%
January%
February%
March%

- (4) State the number of pupils in grade ten who have
dropped out of school from the beginning of school
in fall till the end of March of this year.
Number of girls who dropped out
Number of boys who dropped out
Total

Signed

Name of Principal

Address of School

Department of Educational Administration,
University of Alberta,
Edmonton, Alberta,
May 6th, 1965.

Dear Sir:

Recently I sent a letter to you soliciting your assistance in gathering data for my thesis entitled "Principal-Teacher Relationship as Measured by the Organizational Climate Description Questionnaire and its Relationship with Attitudes and other Variables of Grade Ten Students." The purpose of the study, as you will recall, is to relate principal-teacher relationship with student attitudes towards their school, school program, teachers, principal, et cetera.

I wish to apologize for writing to you again. However, receiving permission from you to collect data in your school is very important to my study--hence this letter. Can you, then, if you find it at all feasible to participate in my study, complete the card and return it at your earliest convenience? Should you have misplaced the first card, another one is included for your convenience.

Thank you very much for your assistance.

Yours truly,

JFP/ys
Encl.

J. F. Pyra.

Department of Educational Administration,
University of Alberta,
Edmonton, Alberta,
May 20th, 1965.

Dear Principal and Students:

This is to advise you that I have received the completed students' questionnaires from your school.

I wish to take this opportunity to thank you for granting me permission to collect data in your school and in providing me with other requested information. Further, I wish to thank specifically the student who was appointed to receive, administer, and return the questionnaires. And finally, I wish to thank the students who took part in answering the questionnaires. The assistance of all of you is greatly appreciated.

Yours truly,

JFP/ys

J. F. Pyra

APPENDIX D

INSTRUCTION SHEET ACCOMPANYING
STUDENT QUESTIONNAIRE

Instructions for the student assistant

Dear Student:

Your principal submitted your name to me as the person in your high school who would help me with my project. Before I proceed any further, I would like to tell you something about myself and my project. I am a graduate student in the Department of Educational Administration at the University of Alberta working towards my Master's Degree. I have completed my course work and am now collecting data for the final requirement before graduating--the thesis. The aim in my thesis is to investigate the relationship between principal-teacher relationship and student attitudes towards their teachers, their school, their course work and other such related student variables.

The package which you received contains, in addition to this instruction sheet, a set of eighteen questionnaires called "How I Feel About My High School." Sixteen of these are to be administered to a sample of sixteen grade ten students. The remaining two questionnaires are included as spares in the eventuality that they should be needed. Here are the steps which you will follow in administering the questionnaire:

- (1) Make certain you have your principal, or teacher appointed by the principal, help you. (Your principal received a special letter informing him of this matter.) Especially have him present in the room when the questionnaires are answered by the students.
- (2) On the day chosen for the administration of the questionnaire choose a sample of sixteen grade ten students out of the total number of grade ten students in your school. This is to be done as follows: on pieces of paper write the names of all grade ten students in your school. Put all their names in a hat and pull sixteen names from the hat. These students will then be given the questionnaire. Should one of the students chosen be absent on that day, pull another name from the hat to replace the absent student. (Note, for the administration of the test, pick a day when most of the grade ten students are in school.)
- (3) Should there be fewer than sixteen students in the grade ten class in your school, administer the questionnaire to all the grade ten students present.
- (4) Once your sample of grade ten students has been chosen, get them all together in a room assigned to you by the principal. (Arrange for a room beforehand.)
- (5) Have the students seat themselves. (Make certain that you have the principal or teacher assigned present in the room

THE first of the most important events in the history of the city of Boston was the arrival of the first settlers in 1630. These settlers, who were Puritans, came from England and settled in the city of Boston. They were led by John Winthrop, who was the first governor of the city. The settlers found the city to be a very fertile and healthy place, and they began to build houses and other buildings. They also began to plant crops and to raise livestock. The city grew very rapidly, and by 1640 it was one of the largest cities in New England.

The second of the most important events in the history of the city of Boston was the arrival of the first African Americans in 1638. These African Americans, who were from the West Indies, came to the city of Boston and settled in the city. They were led by John Rolfe, who was the first governor of the city. The African Americans found the city to be a very fertile and healthy place, and they began to build houses and other buildings. They also began to plant crops and to raise livestock. The city grew very rapidly, and by 1640 it was one of the largest cities in New England.

The third of the most important events in the history of the city of Boston was the arrival of the first Native Americans in 1639. These Native Americans, who were from the Massachusetts Bay, came to the city of Boston and settled in the city. They were led by John Rolfe, who was the first governor of the city. The Native Americans found the city to be a very fertile and healthy place, and they began to build houses and other buildings. They also began to plant crops and to raise livestock. The city grew very rapidly, and by 1640 it was one of the largest cities in New England.

The fourth of the most important events in the history of the city of Boston was the arrival of the first European settlers in 1630. These European settlers, who were from England, came to the city of Boston and settled in the city. They were led by John Winthrop, who was the first governor of the city. The European settlers found the city to be a very fertile and healthy place, and they began to build houses and other buildings. They also began to plant crops and to raise livestock. The city grew very rapidly, and by 1640 it was one of the largest cities in New England.

The fifth of the most important events in the history of the city of Boston was the arrival of the first African American settlers in 1638. These African American settlers, who were from the West Indies, came to the city of Boston and settled in the city. They were led by John Rolfe, who was the first governor of the city. The African American settlers found the city to be a very fertile and healthy place, and they began to build houses and other buildings. They also began to plant crops and to raise livestock. The city grew very rapidly, and by 1640 it was one of the largest cities in New England.

The sixth of the most important events in the history of the city of Boston was the arrival of the first Native American settlers in 1639. These Native American settlers, who were from the Massachusetts Bay, came to the city of Boston and settled in the city. They were led by John Rolfe, who was the first governor of the city. The Native American settlers found the city to be a very fertile and healthy place, and they began to build houses and other buildings. They also began to plant crops and to raise livestock. The city grew very rapidly, and by 1640 it was one of the largest cities in New England.

The seventh of the most important events in the history of the city of Boston was the arrival of the first European settlers in 1630. These European settlers, who were from England, came to the city of Boston and settled in the city. They were led by John Winthrop, who was the first governor of the city. The European settlers found the city to be a very fertile and healthy place, and they began to build houses and other buildings. They also began to plant crops and to raise livestock. The city grew very rapidly, and by 1640 it was one of the largest cities in New England.

and assisting in supervision throughout the whole time that the questionnaire is being administered.)

- (6) Distribute the questionnaires to the students.
- (7) Read the instructions on the first page of the questionnaire to the students. If you wish, this reading of instructions may be done by the teacher assisting you.
- (8) There is no time limit.
- (9) When the questionnaires have been answered, have the students return them to you.
- (10) In the presence of the other students in the classroom, put the answered questionnaires in the envelope and seal it. The envelope is self-addressed and stamped with the necessary postage. Please return it to me as soon as possible.
- (11) Note, please do not permit the students to see the questionnaire before the assigned time of administration of the questionnaires.

I know that this has taken a great deal of work and planning on your part. May I take this opportunity to thank you very much for your assistance.

Yours truly,

JFP/ys

Joseph F. Pyra

APPENDIX E

INTERCORRELATIONS BETWEEN OCDQ
SUBTEST SCORES

THE UNIVERSITY OF CHICAGO
THE EAST ASIAN LIBRARY
540 EAST 57TH STREET
CHICAGO, ILL. 60637

OCDQ Subtests^a

OCDQ Subtests	Dis	Hin	Esp	Int	Aloof	Pr Em	Thrust	Con
Disengagement	1.000	.524	-.640	-.059	.397	.304	-.507	-.083
Hindrance	.524	1.000	-.460	-.074	.356	.271	-.364	-.129
Esprit	-.640	-.460	1.000	.207	-.360	.017	.569	.215
Intimacy	-.059	-.074	.207	1.000	-.118	.010	.134	.027
Aloofness	.397	.356	-.360	-.118	1.000	.044	-.335	.080
Prod Emphasis	.304	.271	.017	.010	.044	1.000	.101	.006
Thrust	-.507	-.364	.569	.134	-.335	.101	1.000	.472
Consideration	-.083	-.129	.215	.027	.080	.006	.472	1.000

^aCritical values are: .10 = .243; .05 = .288; .01 = .372

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